

Keys for Successful Negotiation of Retrograde Approach

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Basics of Retrograde approach

- 1. Preparation for Retrograde approach**
- 2. Tip and tricks of channel selection**
- 3. Wire crossing**

Preparation for Retrograde approach

1. **> 7Fr system for retrograde approach**
2. **Microcatheter (Corsair is recommended)**
3. **Guide wire to select channel (SION, SION blue, or XT-R etc)**
4. **IVUS (Eagle-eye is recommended)**
5. **330cm guide wire (RG3) for externalization**
6. **ACT monitoring and flush guiding catheter**

Complication in Retrograde approach Thrombus in GC

Thrombus retrieved from GC for RCA

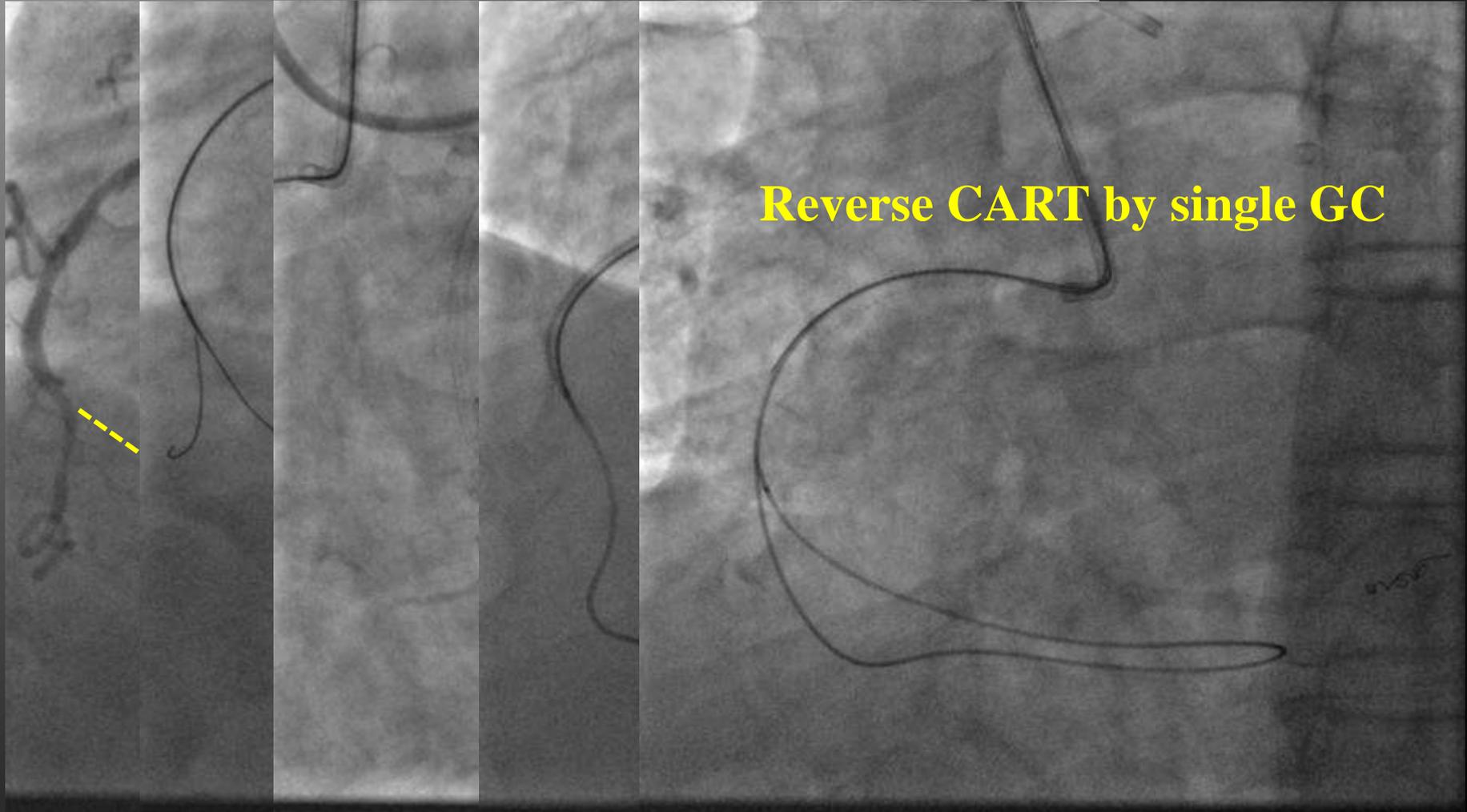


RCA CTO

Procedure time was 6.5 hours

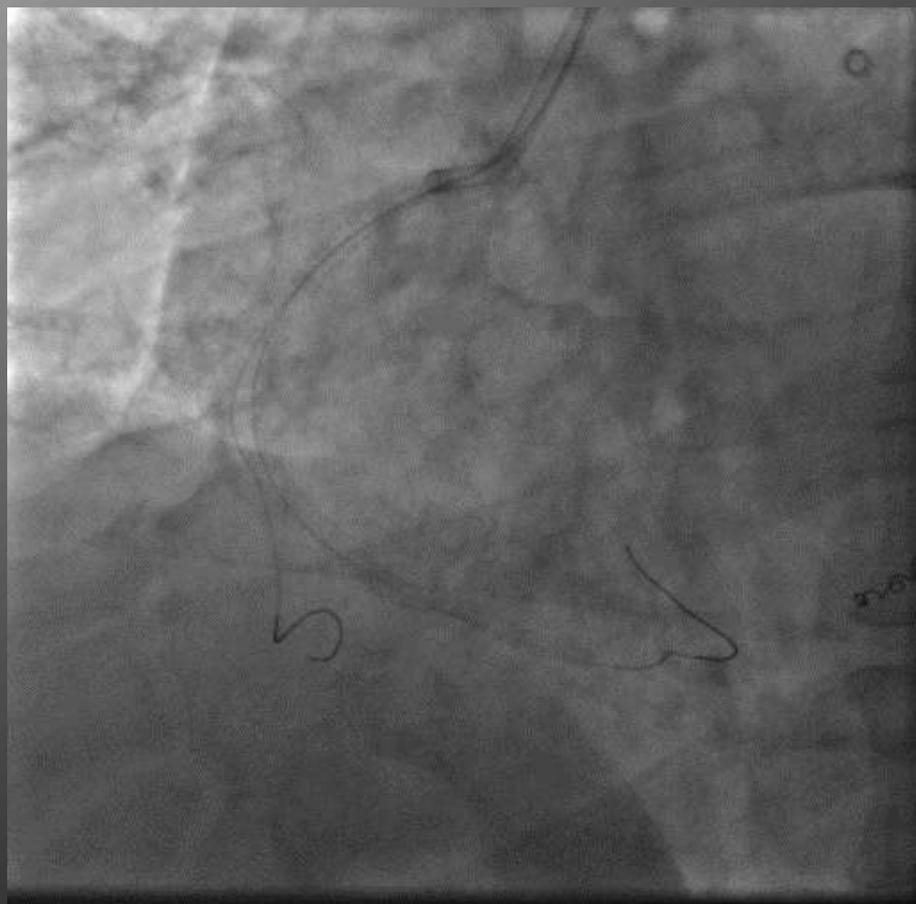
ACT was checked every 30 minutes and kept >300sec





Reverse CART by single GC

Retro from RV branch

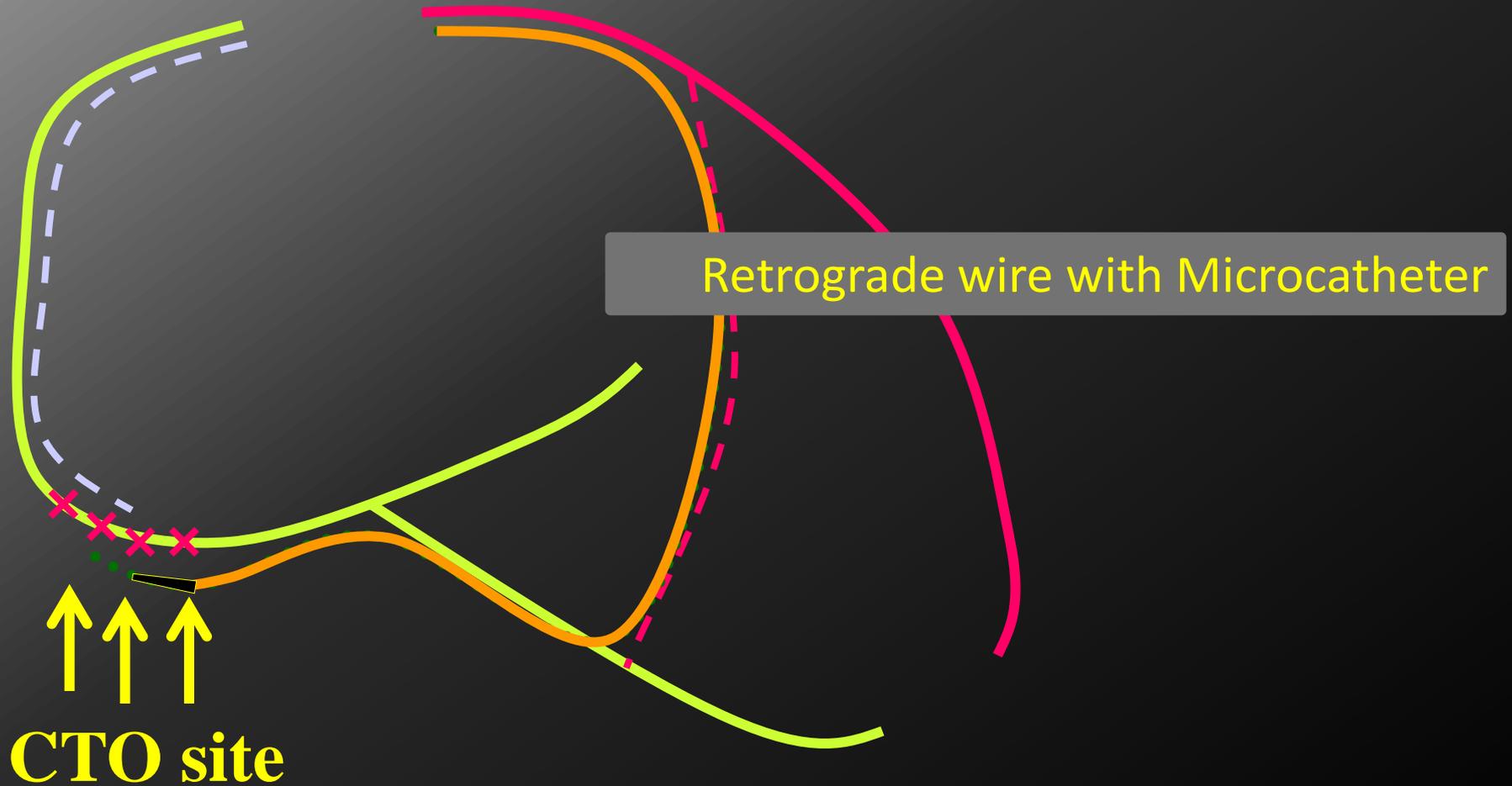




How to prevent complication of CTO PCI

1. ACT should be kept >300 sec
2. ACT should be checked every 30 minutes.
3. Flush saline every 10 minutes for retro GC.
4. Single GC strategy is not recommended.

Channel selection



Basics of Retrograde approach

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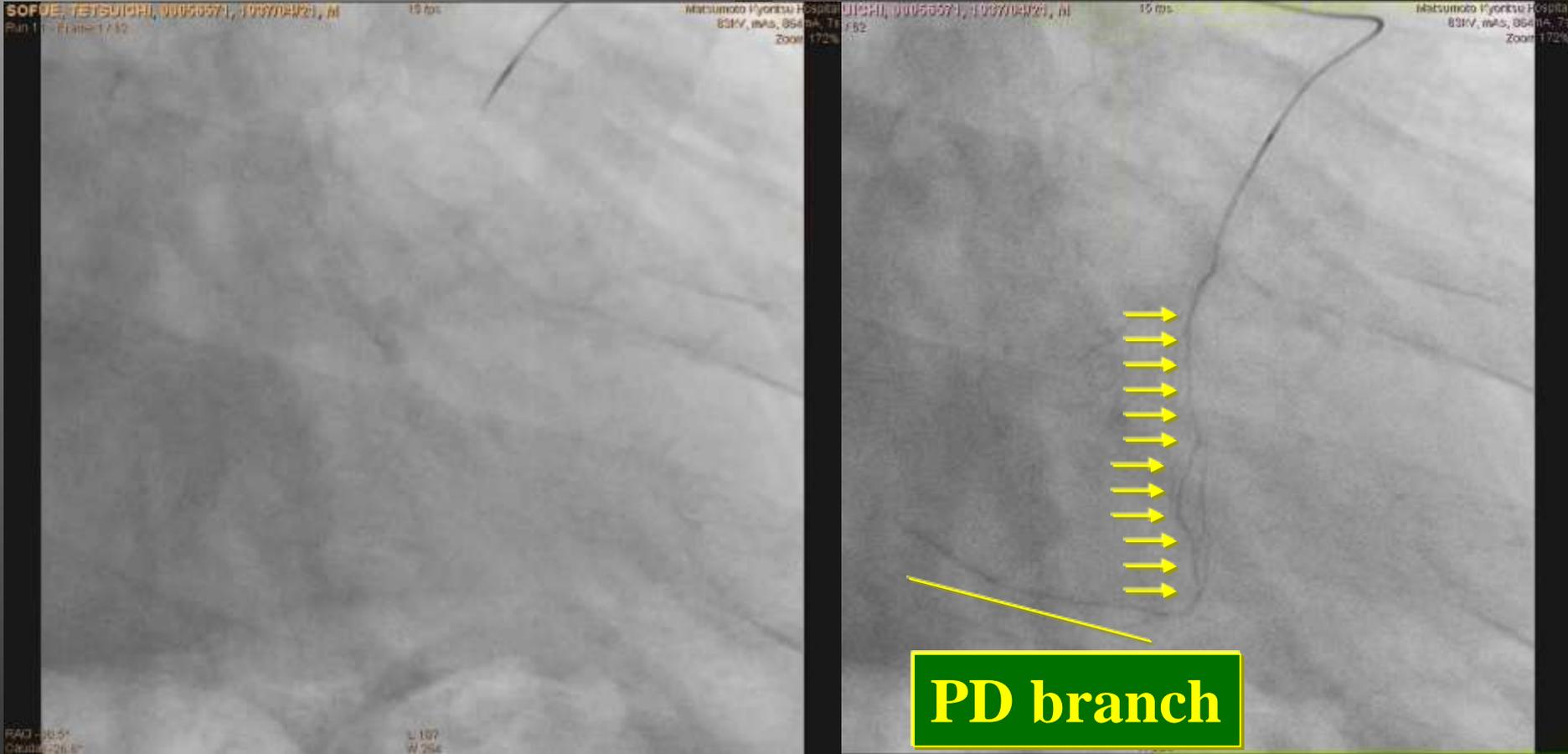
Angiographic view is very important!



RAO CRA

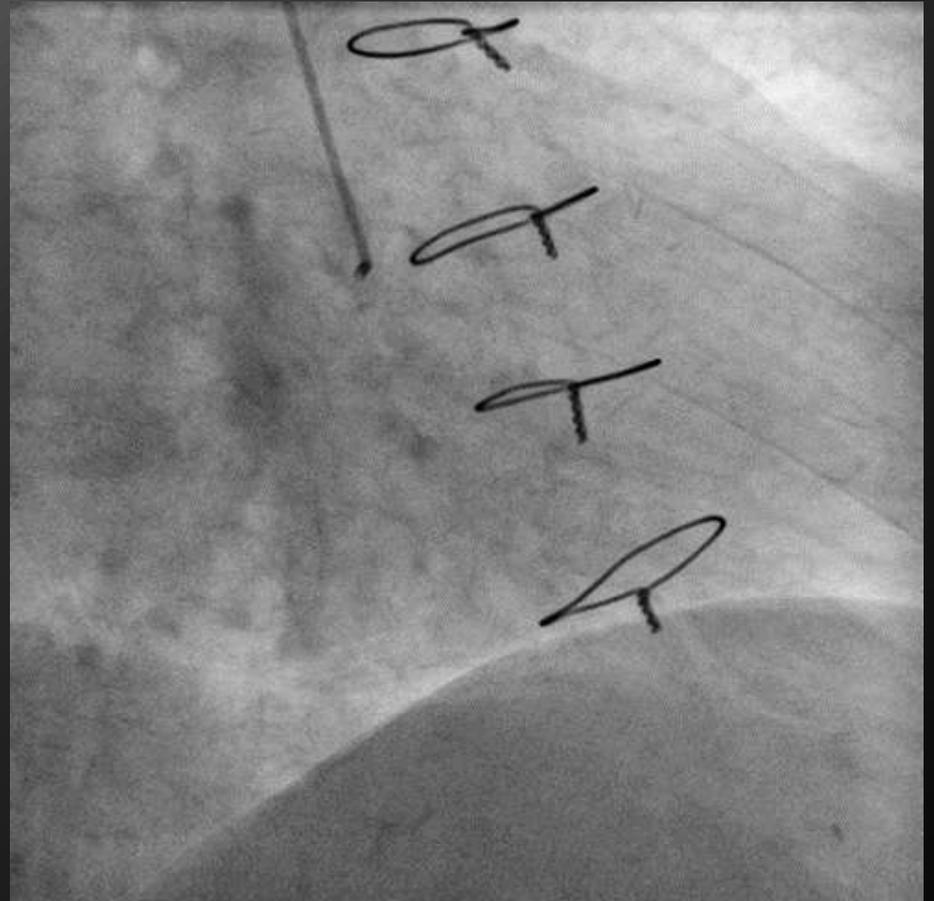
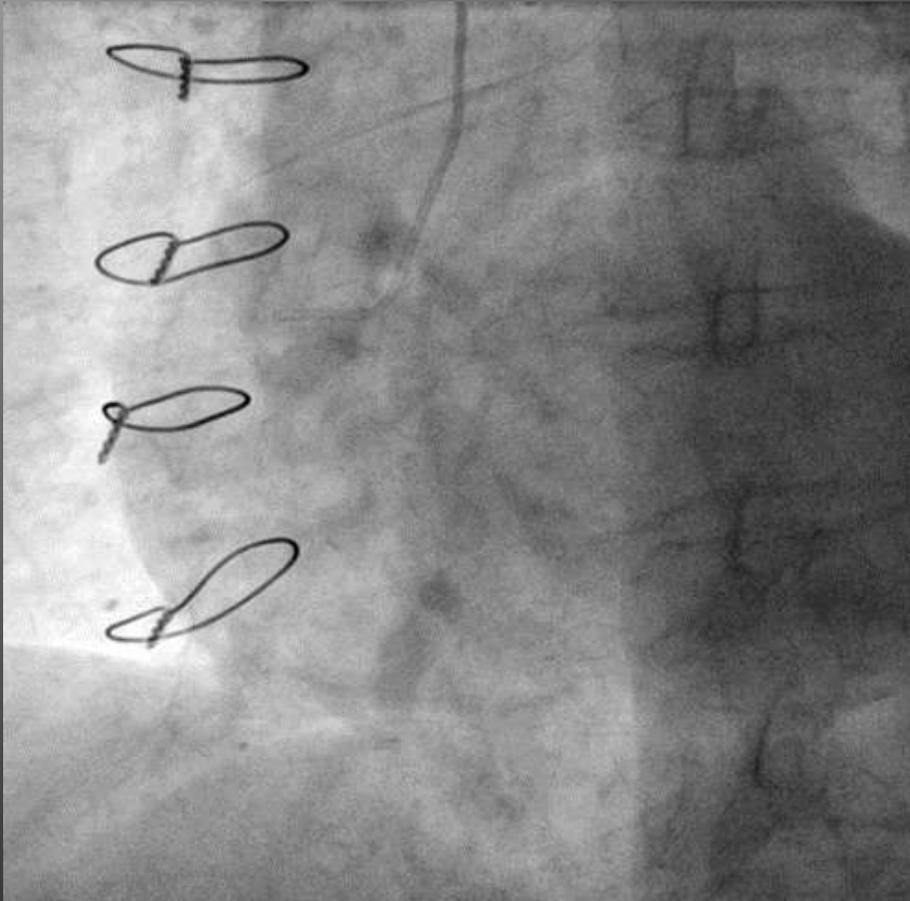
PD branch

Angiographic view is very important!

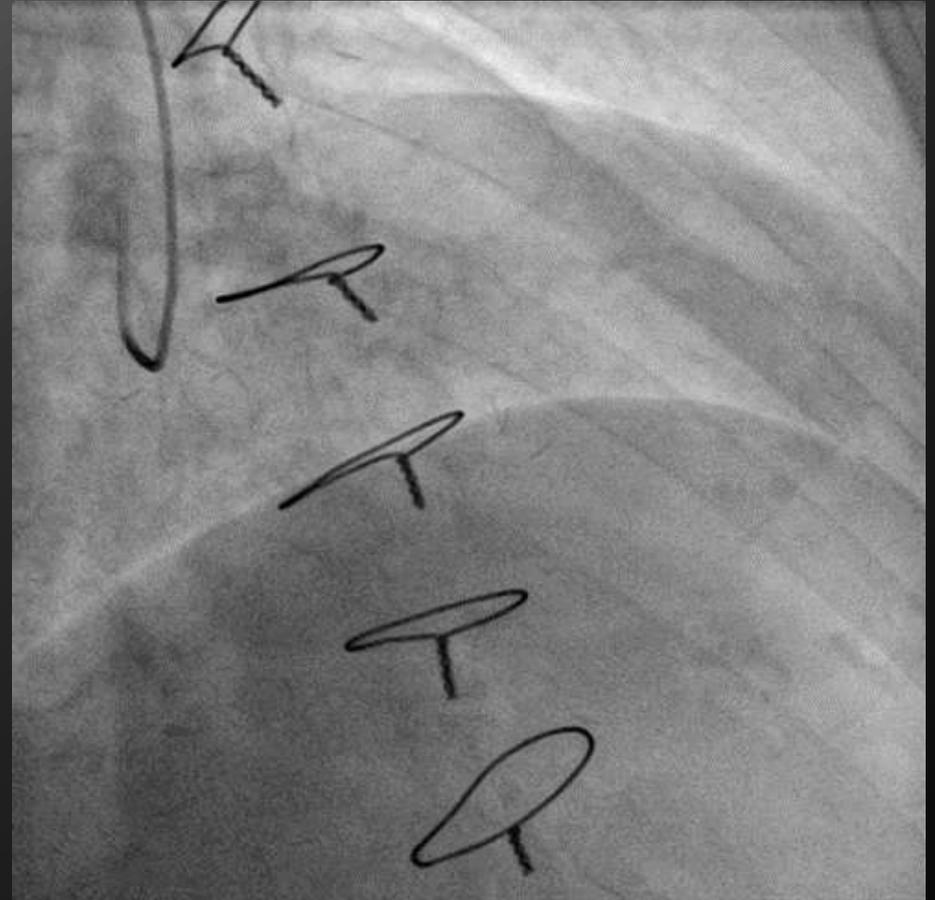
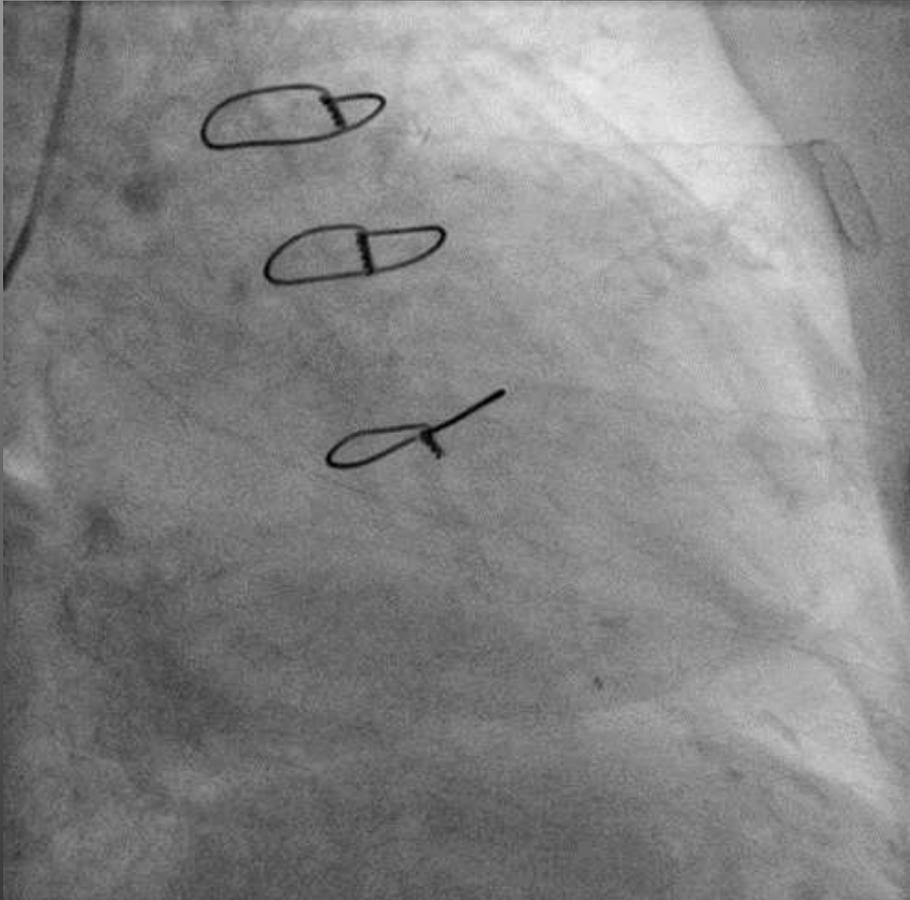


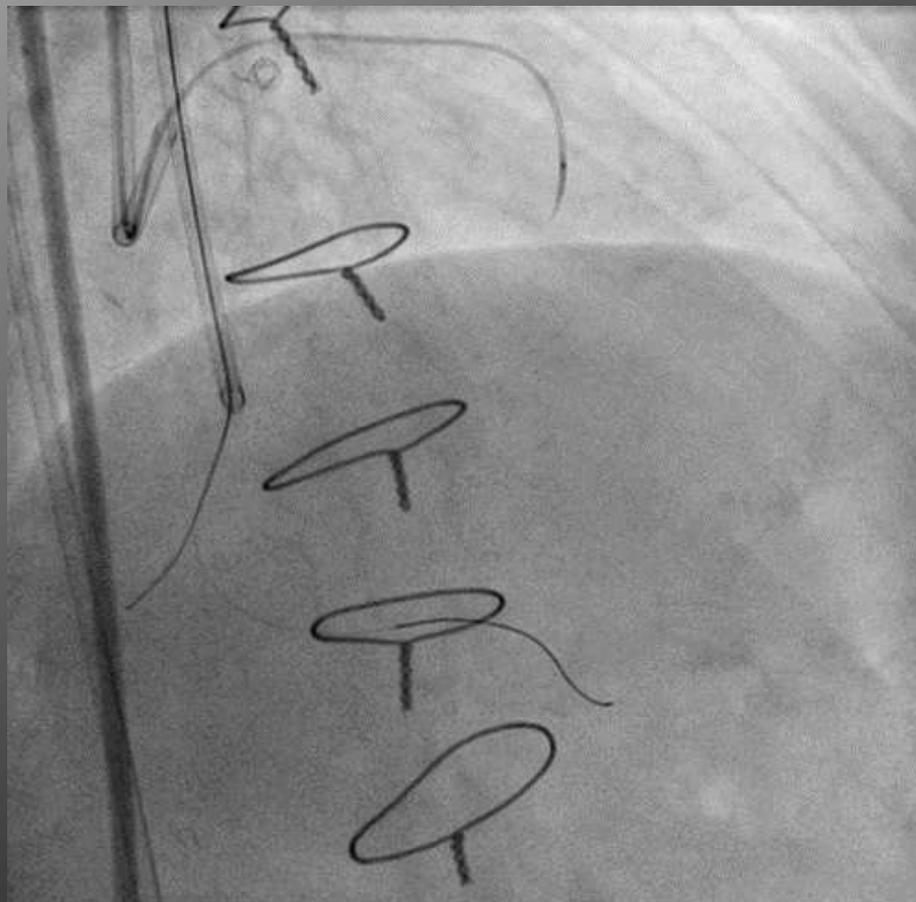
RAO CAU

Case 2 RCA CTO

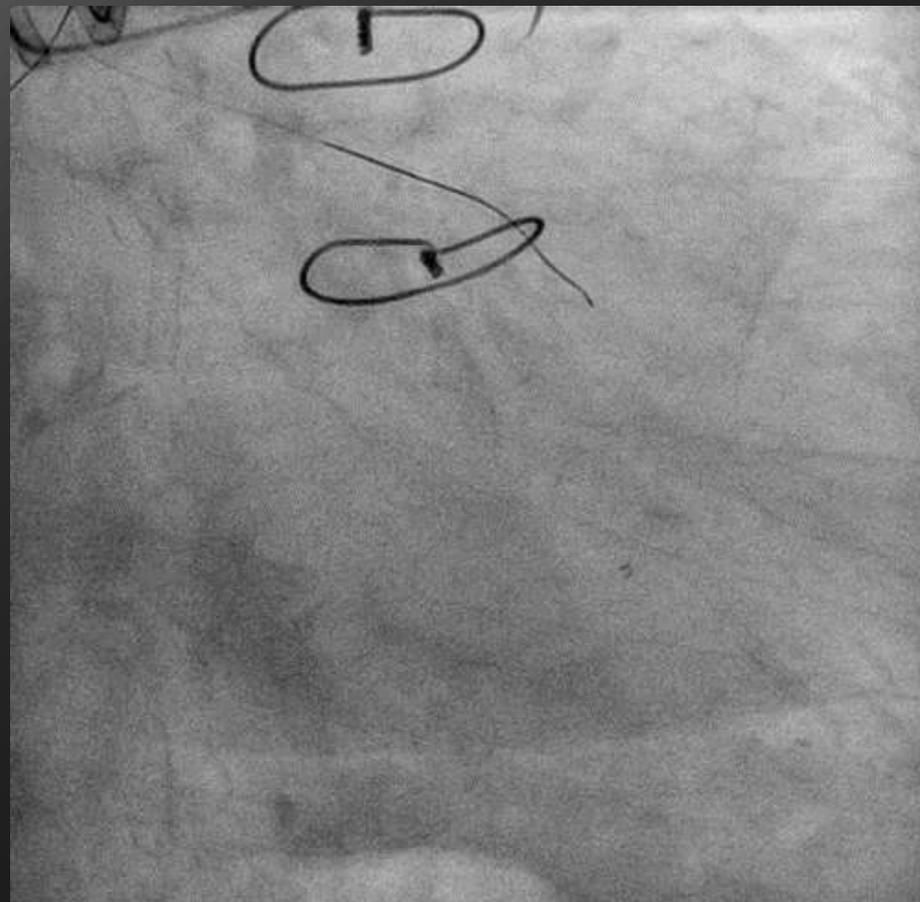


Case 2 RCA CTO

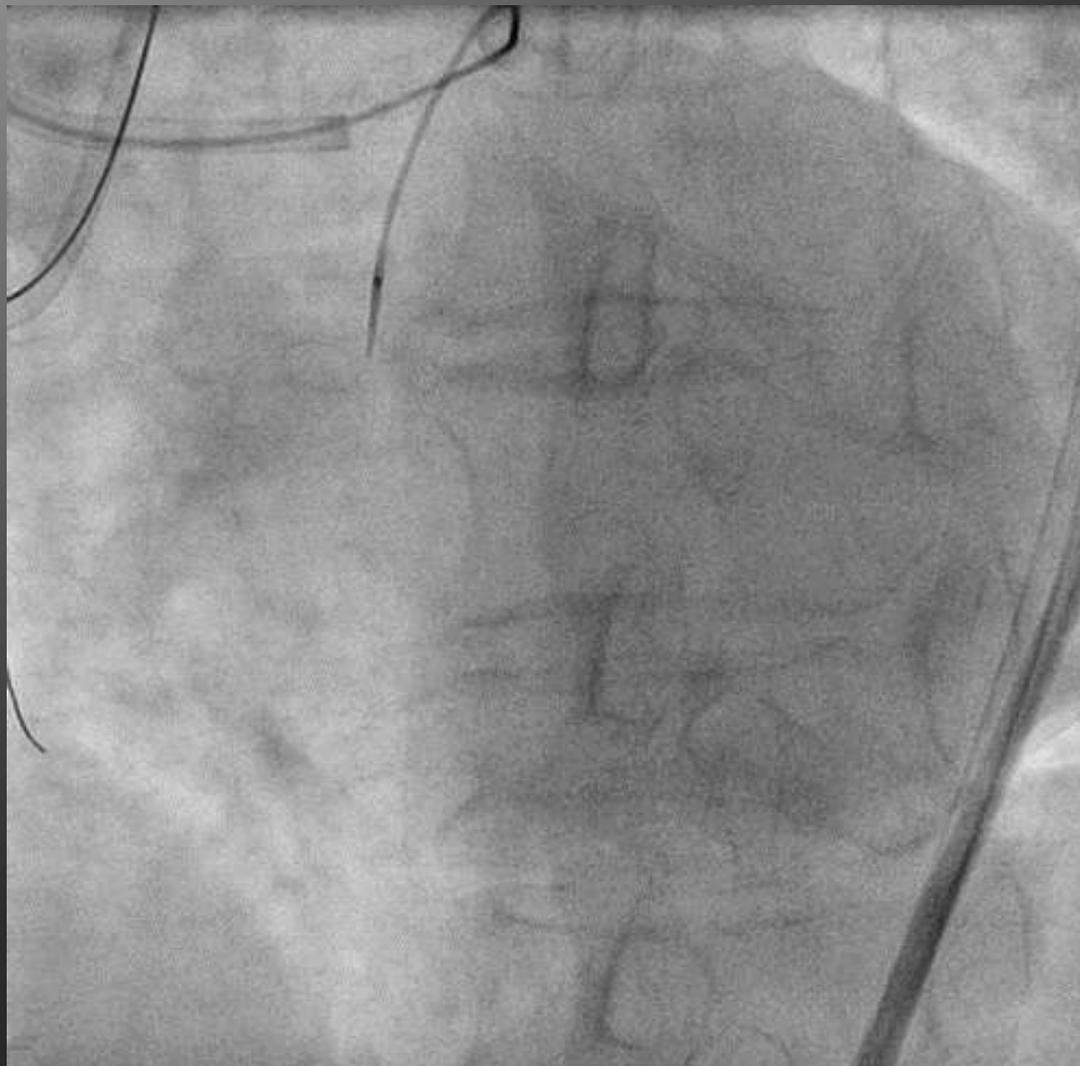




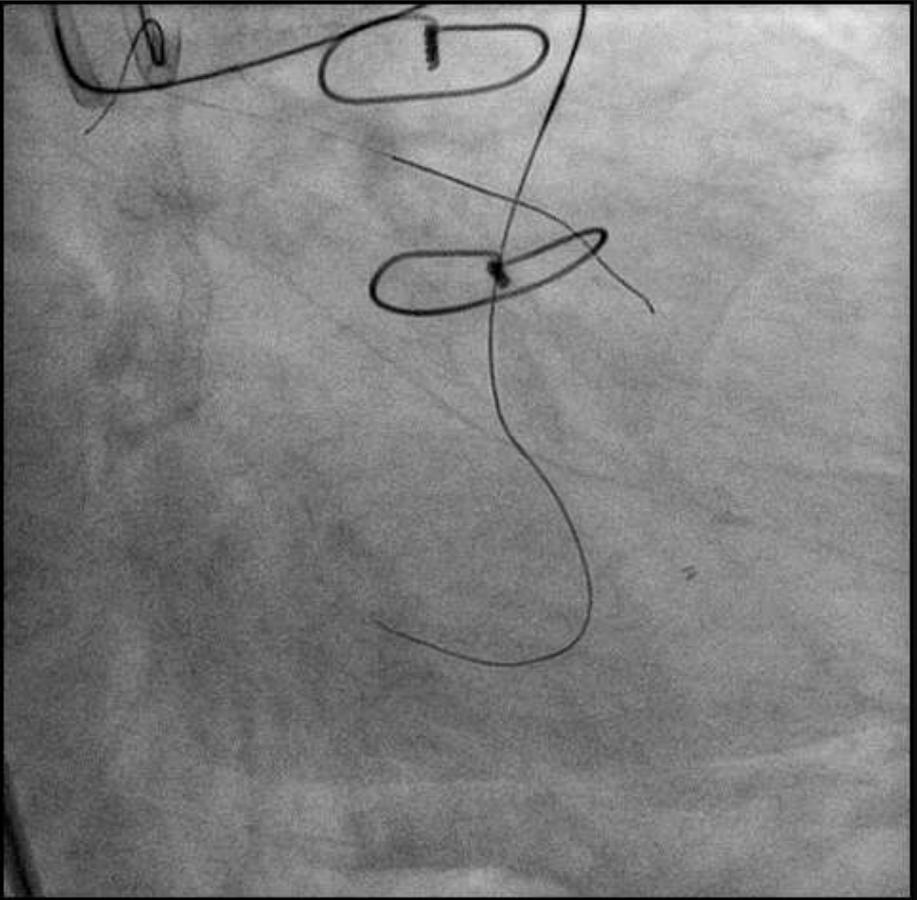
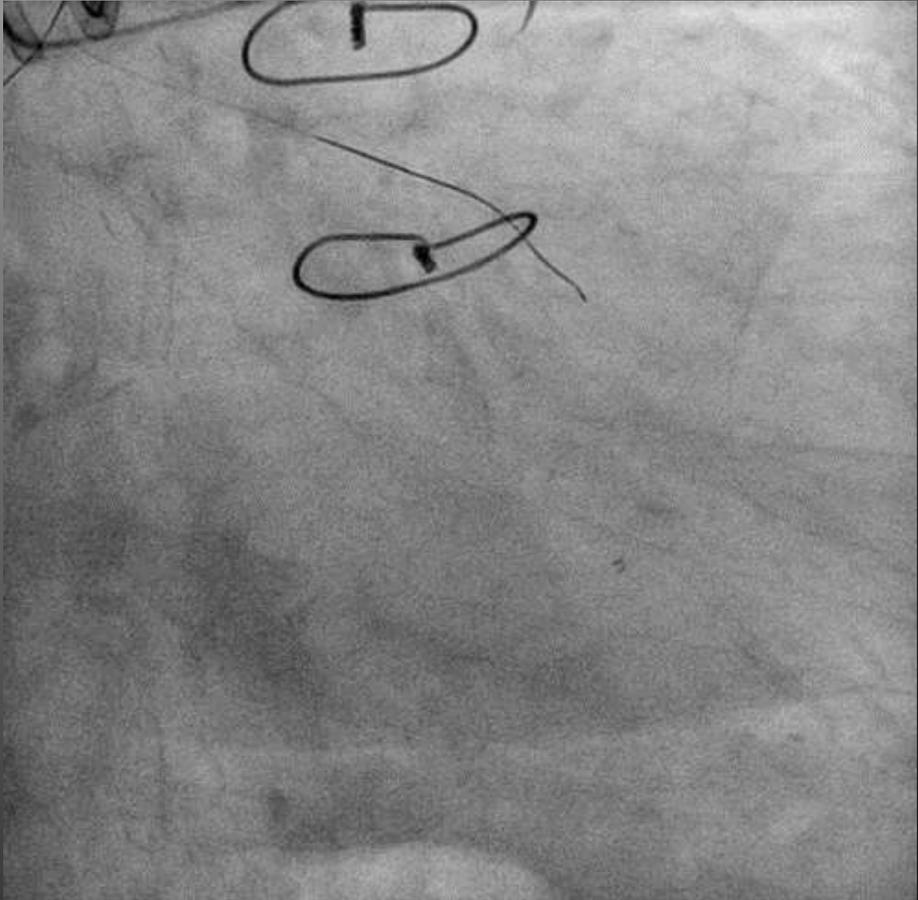
RAO CRA



RAO CAU



LAO CRA



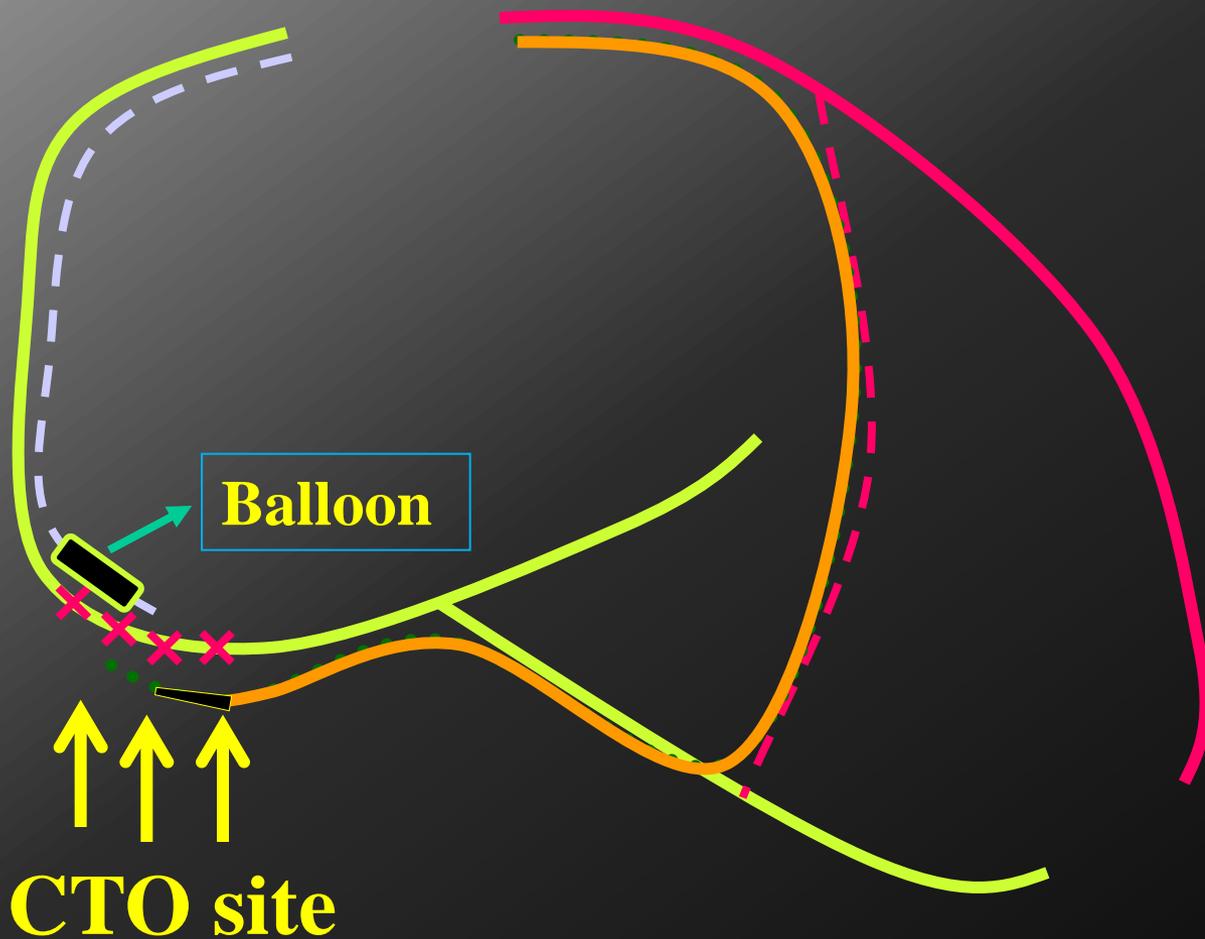
RAO CAU

Basics of Retrograde approach

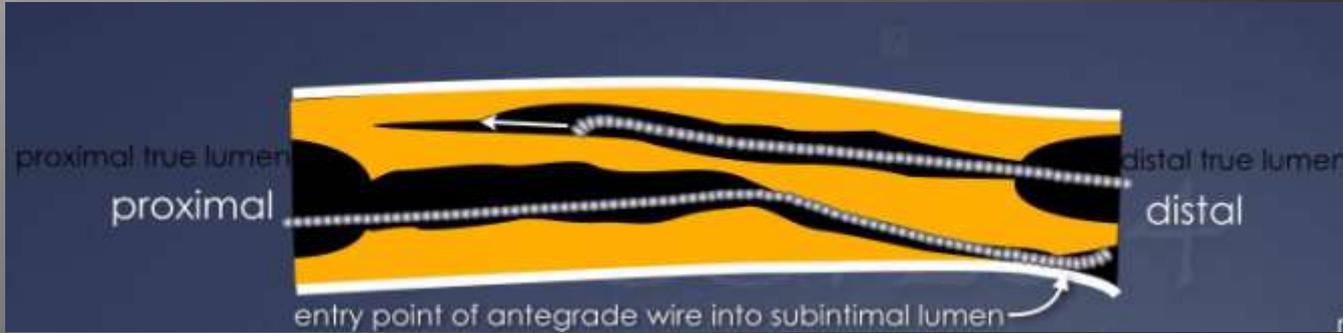
1. Preparation for Retrograde approach
2. Tip and tricks of channel selection
3. Wire crossing

Reverse CART

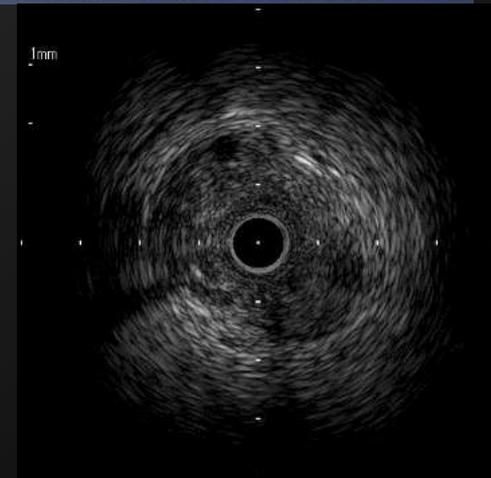
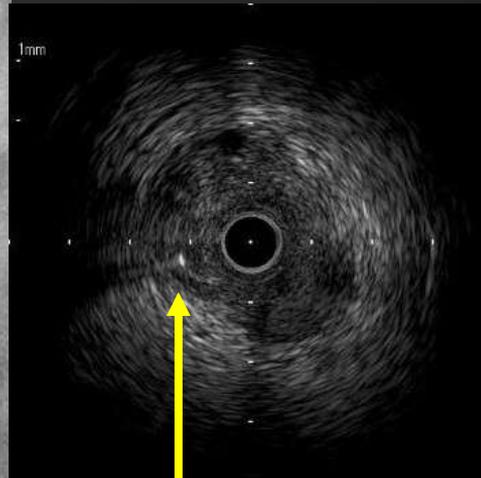
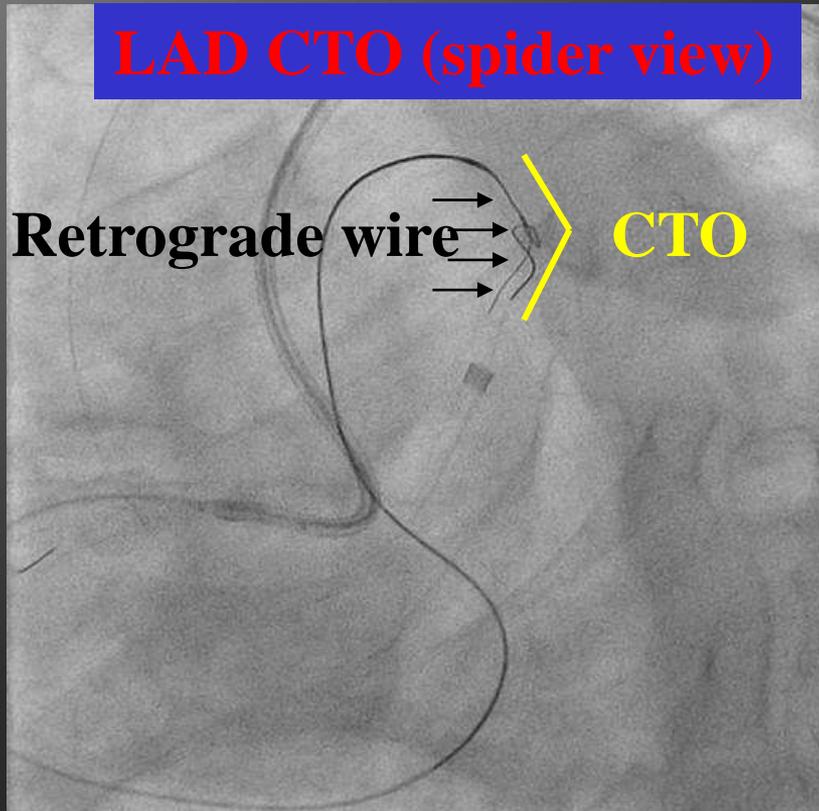
Concept: Antegrade POBA for making connection between antegrade and retrograde



Contemporary Reverse CART



LAD CTO (spider view)



Retro wire is in the plaque

Contemporary Reverse CART

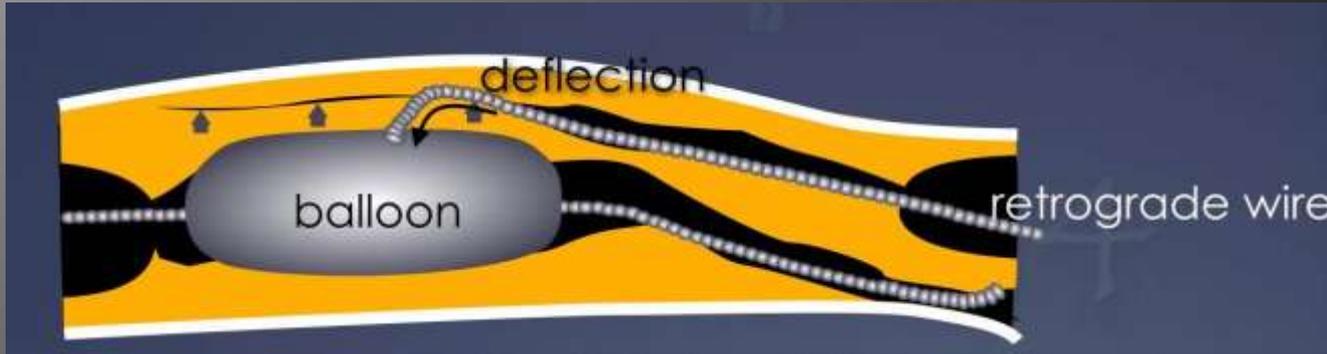
LAD CTO (spider view)

Retrograde wire

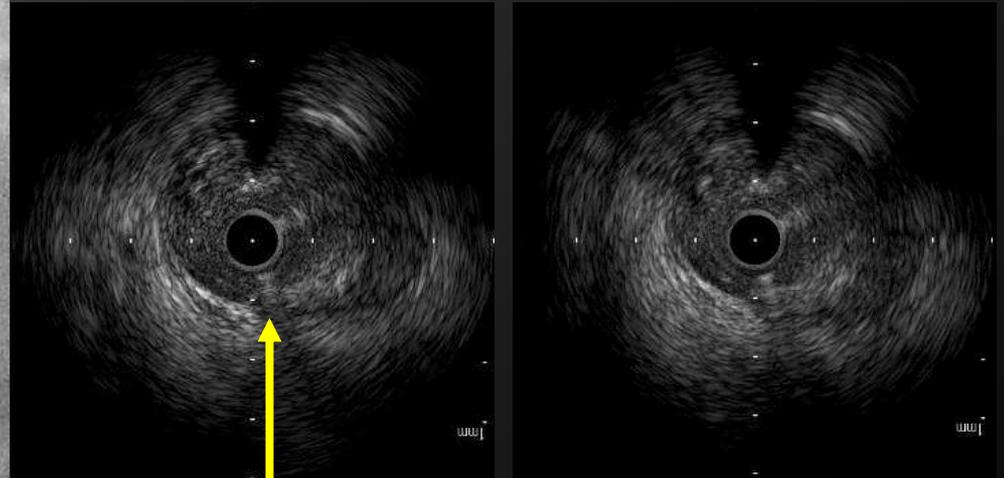
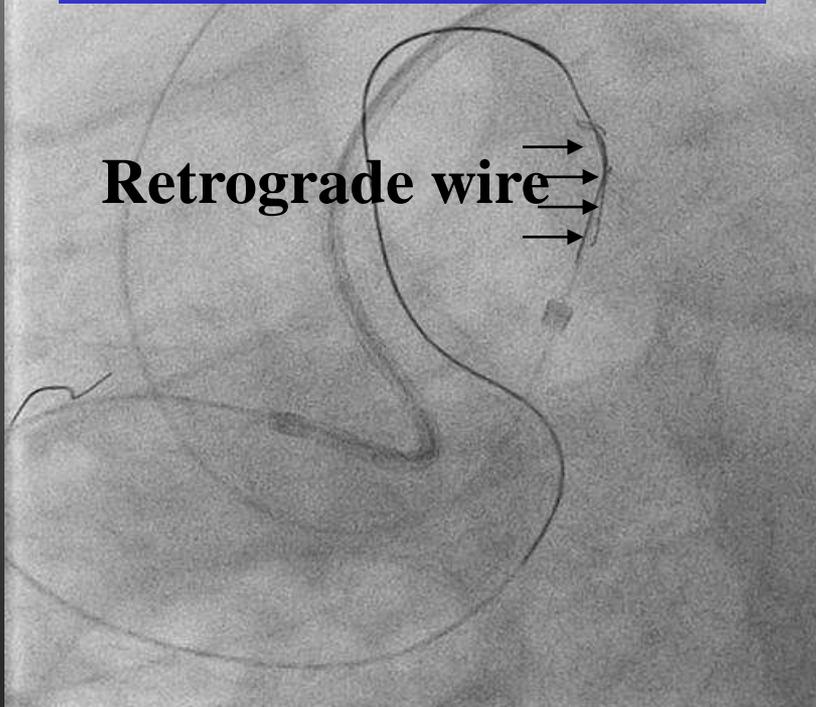
3.0mm POBA



Contemporary Reverse CART

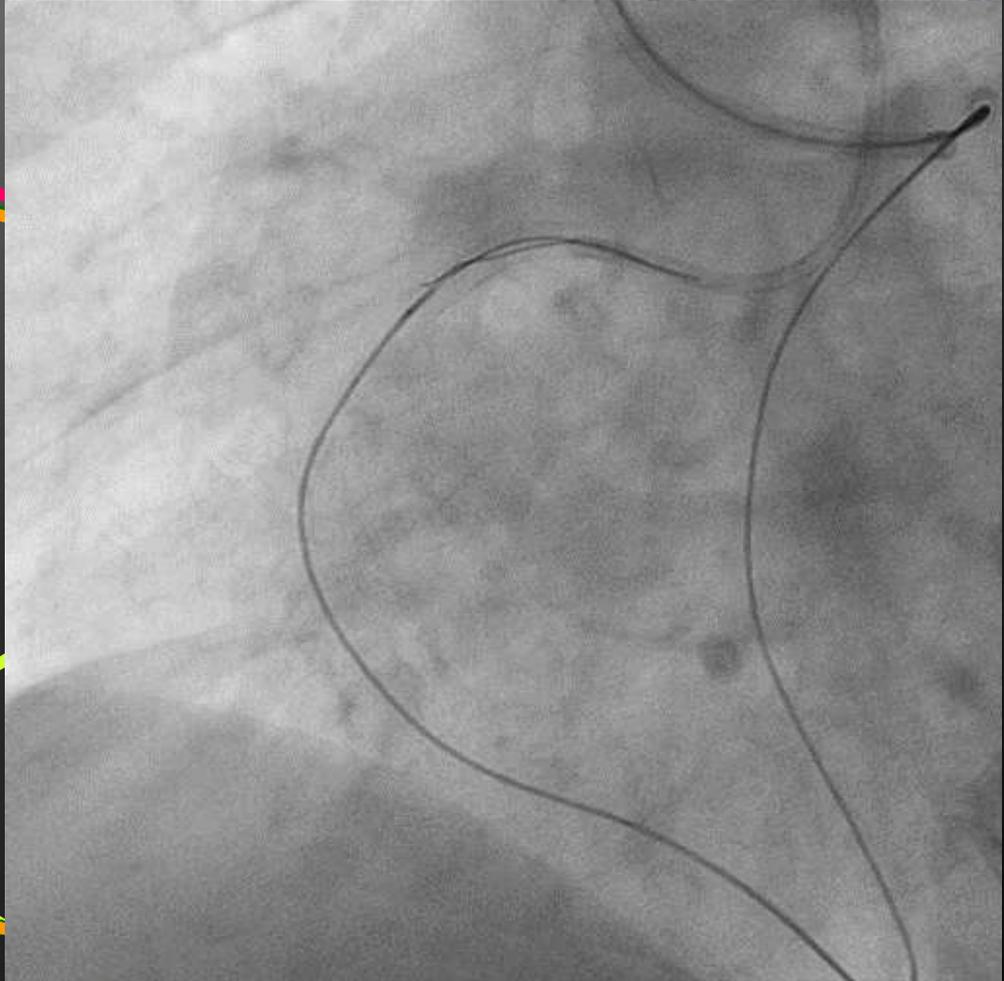
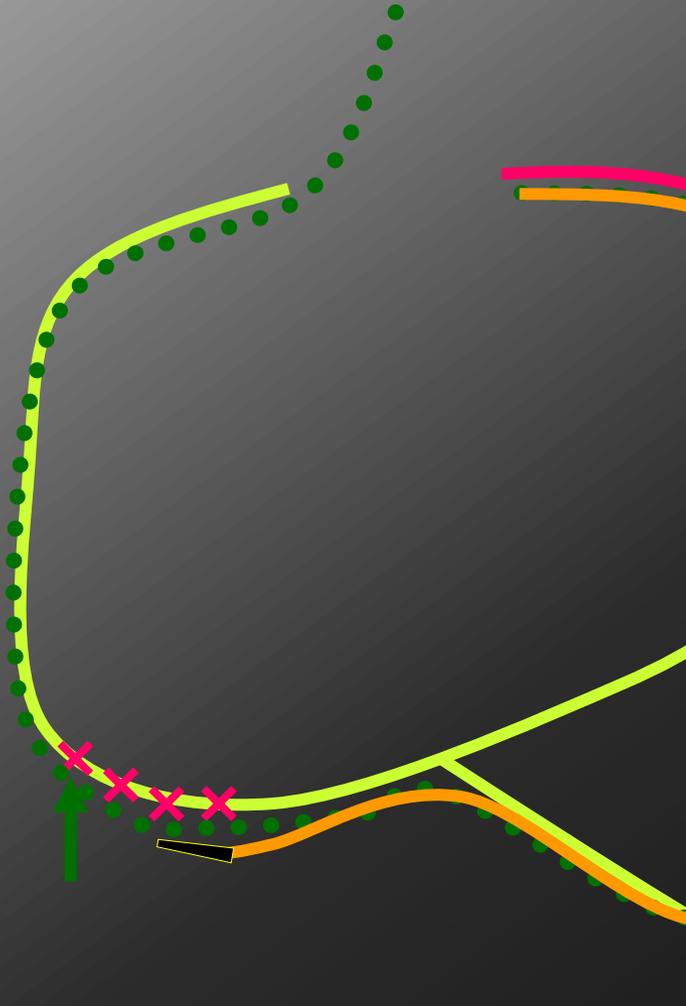


LAD CTO (spider view)



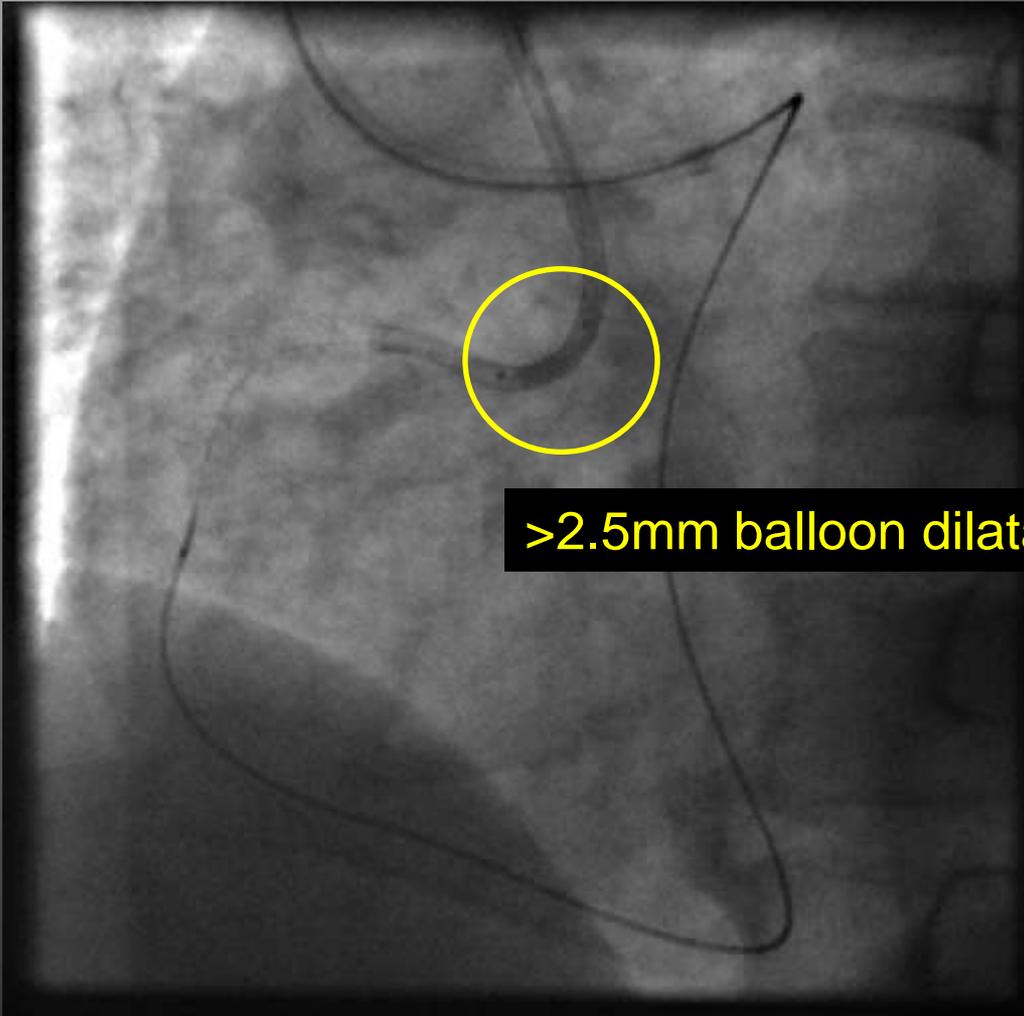
Retro wire is in the same space

Wire crossing from retrogradely



Retrograde wire & microcatheter
cross to antegrade GC

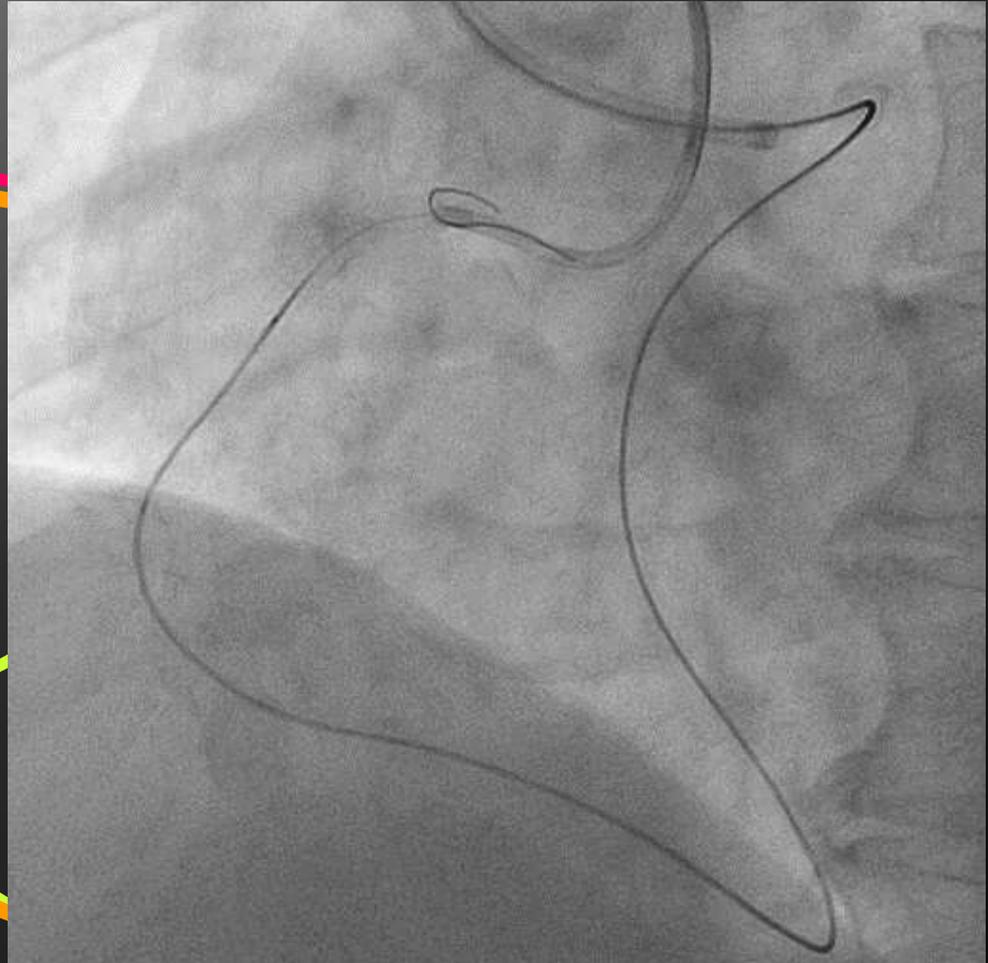
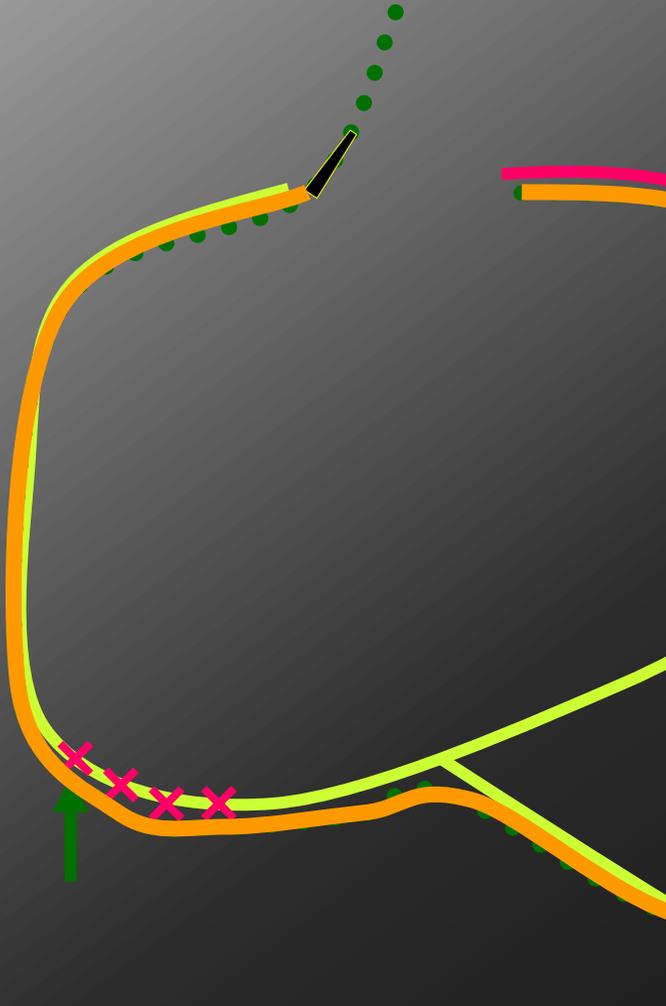
Trapping retro wire in ante GC



>2.5mm balloon dilatation for trapping retro wire

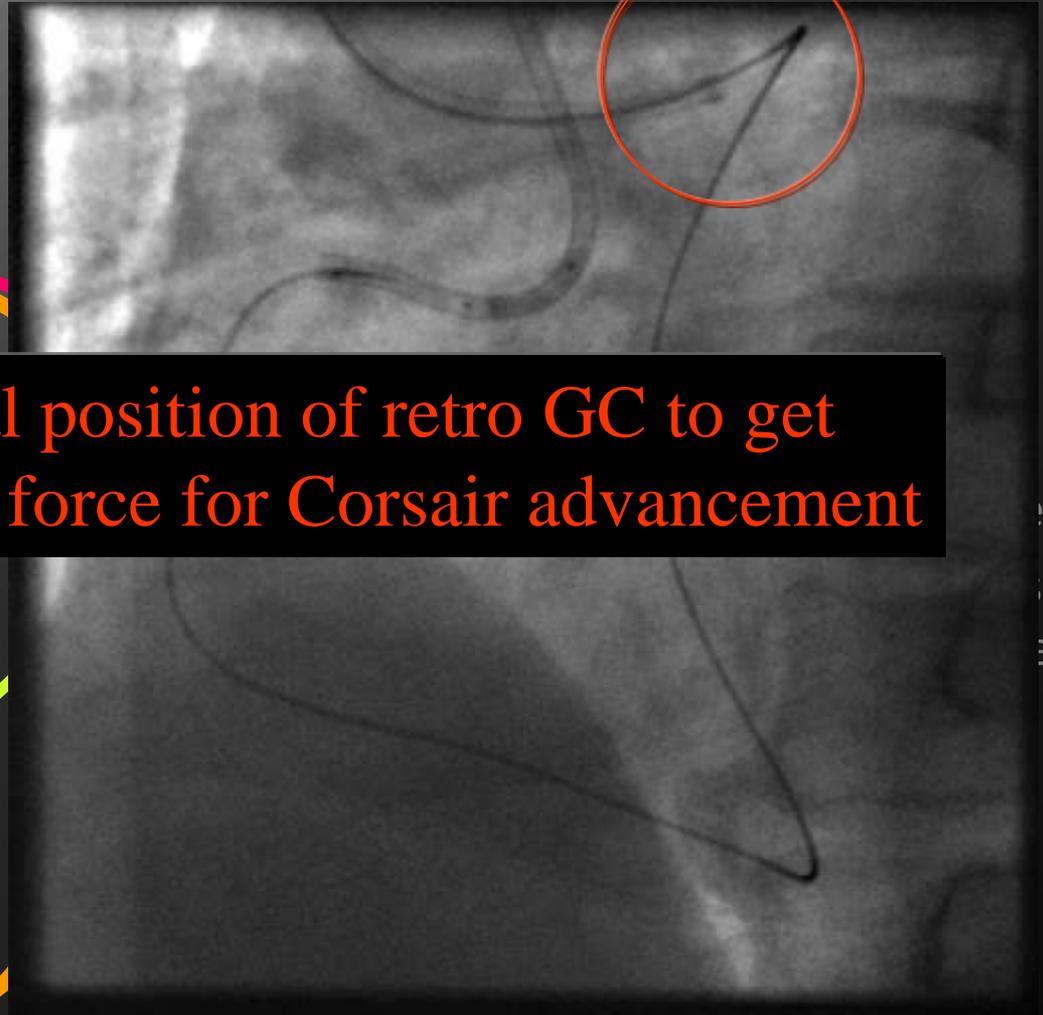
Retrograde wire & microcatheter
cross to antegrade GC

Crossing microcatheter



Retrograde wire & microcatheter
cross to antegrade GC

Keep coaxial position of retro GC to get strong back-up force for Corsair advancement



ASAHI
RG3
PTCA GUIDE WIRE

Characteristics

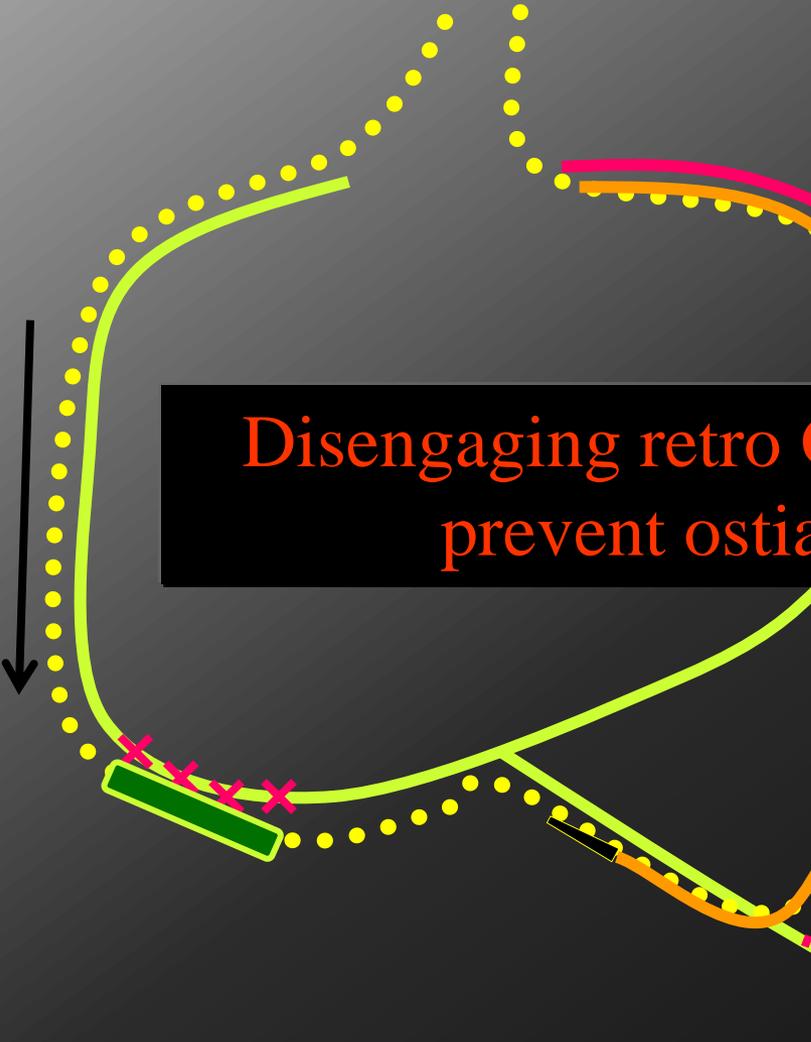
- Optimal wire strength, hydrophilic coating and 0.26mm shaft provide superior inside-catheter pushability.
- With the inner wall damage possibility reduced in tortuous vessels as well, the risk of complication is minimized.

Ordering Information

Structure

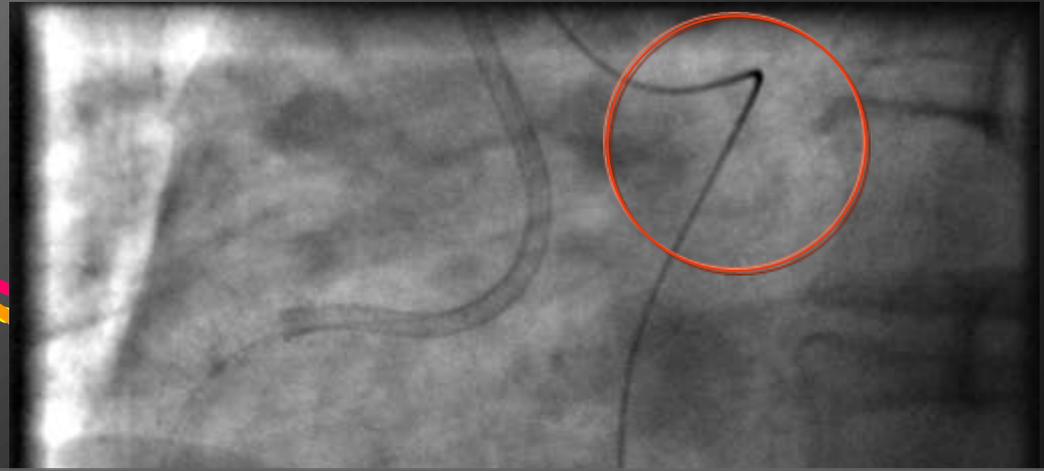
Model	Catalog No.	Wire Size	Wire Length	Spring Coil Length	Redipaque Length	Tip Shape
ASAHI RG3	AHW003020	0.26mm (0.010inch)	230cm	8cm	3cm	Straight

Retrograde wire & microcatheter cross to antegrade GC



Disengaging retro GC during pulling back Corsair to prevent ostial dissection in donor artery

The diagram shows a yellow catheter with a retrograde guidewire (dotted yellow line) and a Corsair catheter (solid yellow line). A black arrow on the left indicates the direction of pulling back. A green rectangular block is positioned at the junction of the retrograde guidewire and the Corsair catheter, with pink 'x' marks indicating the disengagement point. The Corsair catheter is shown with a pink and orange section at its tip.



Procedure from antegrade

POBA and stenting from antegradely

**Never inject from ante GC
after Reverse CART!!**

Reverse CART

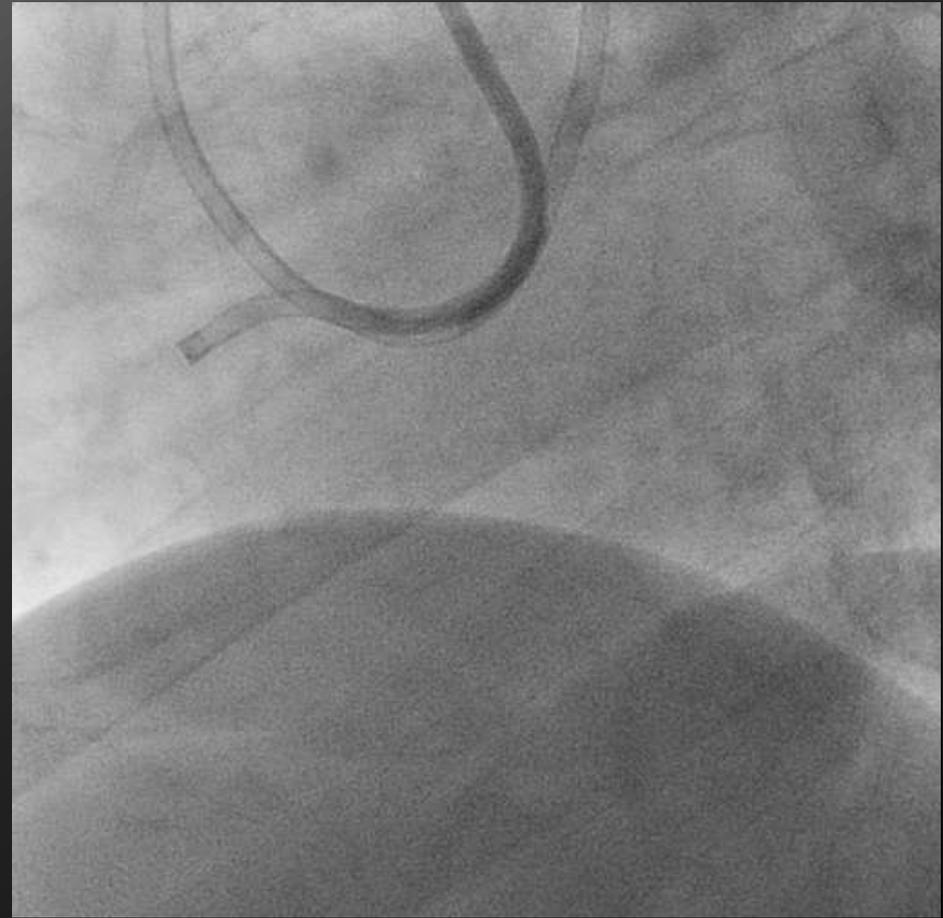
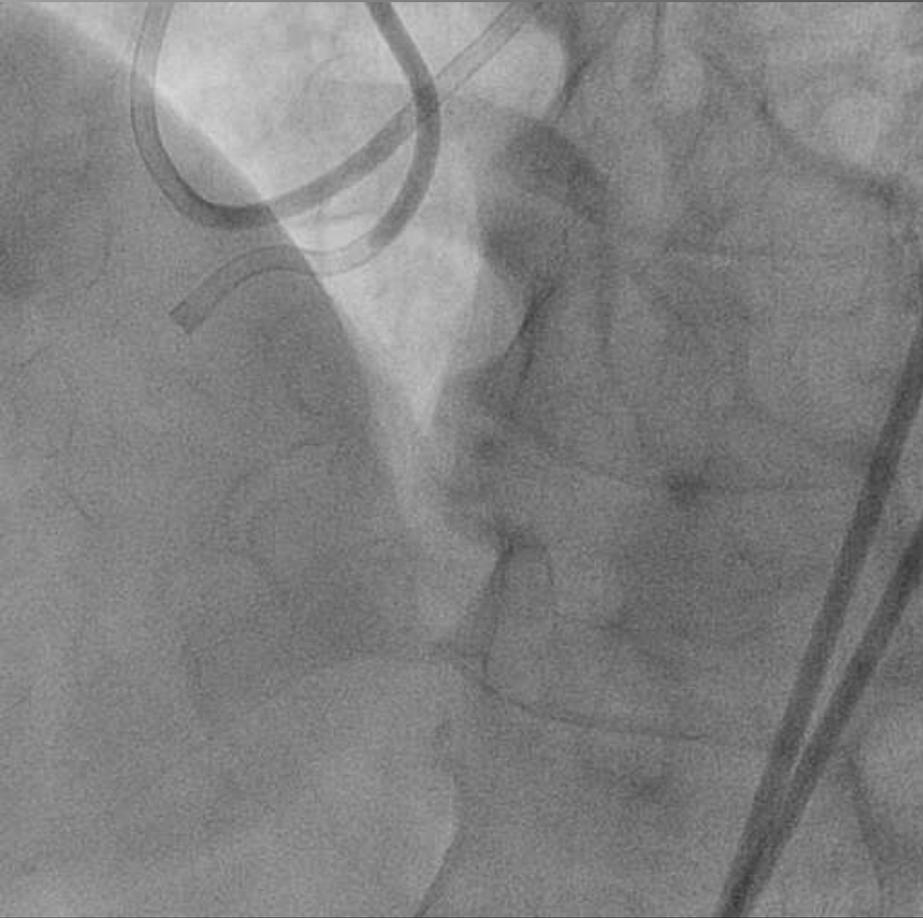
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Making connection by POBA

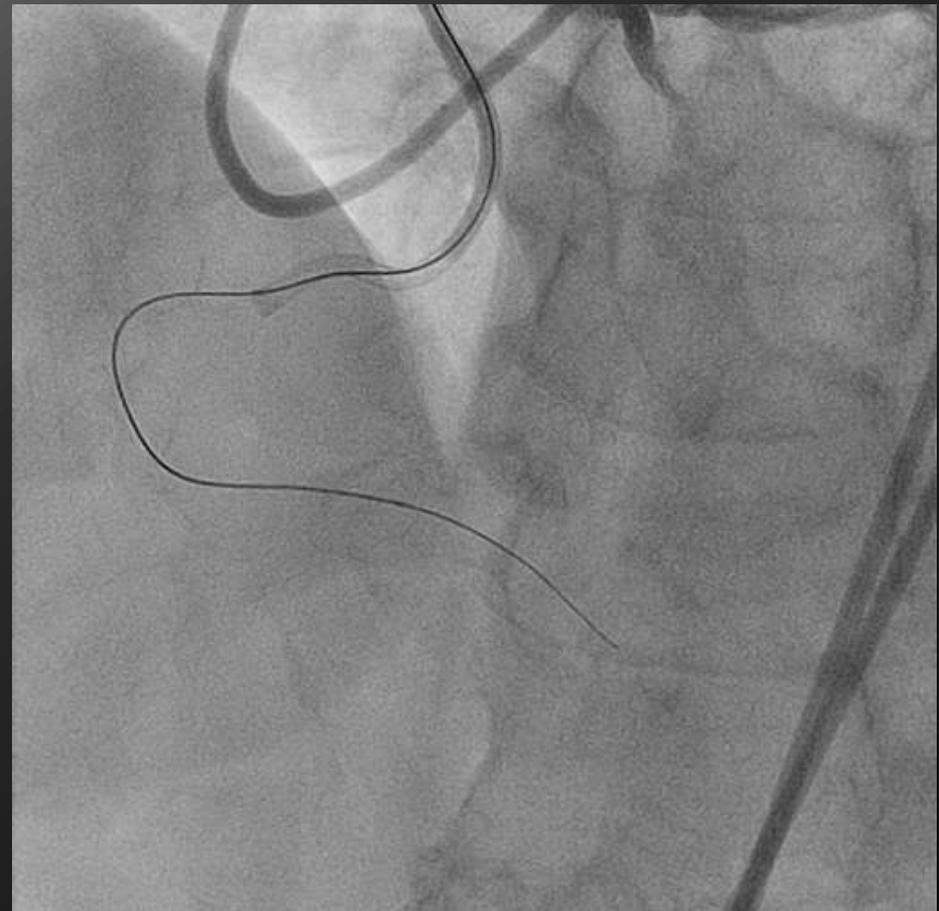
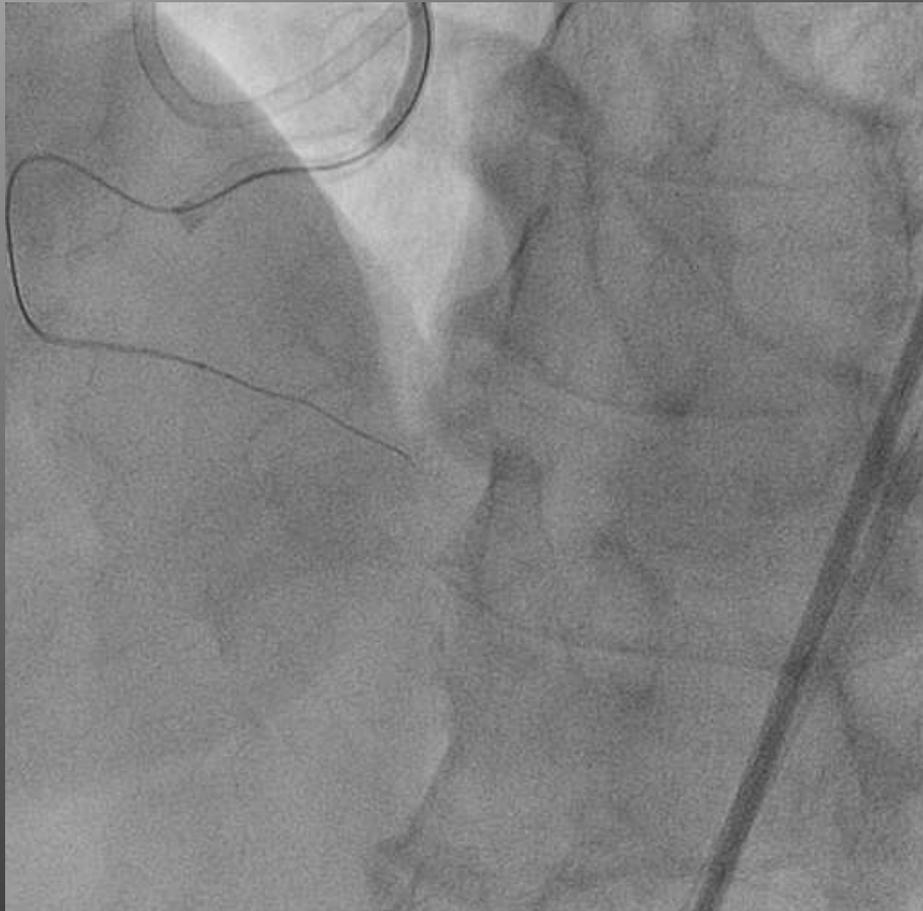
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Making dissection (hematoma) in CTO site

Case 4: RCA CTO treated by Reverse CART

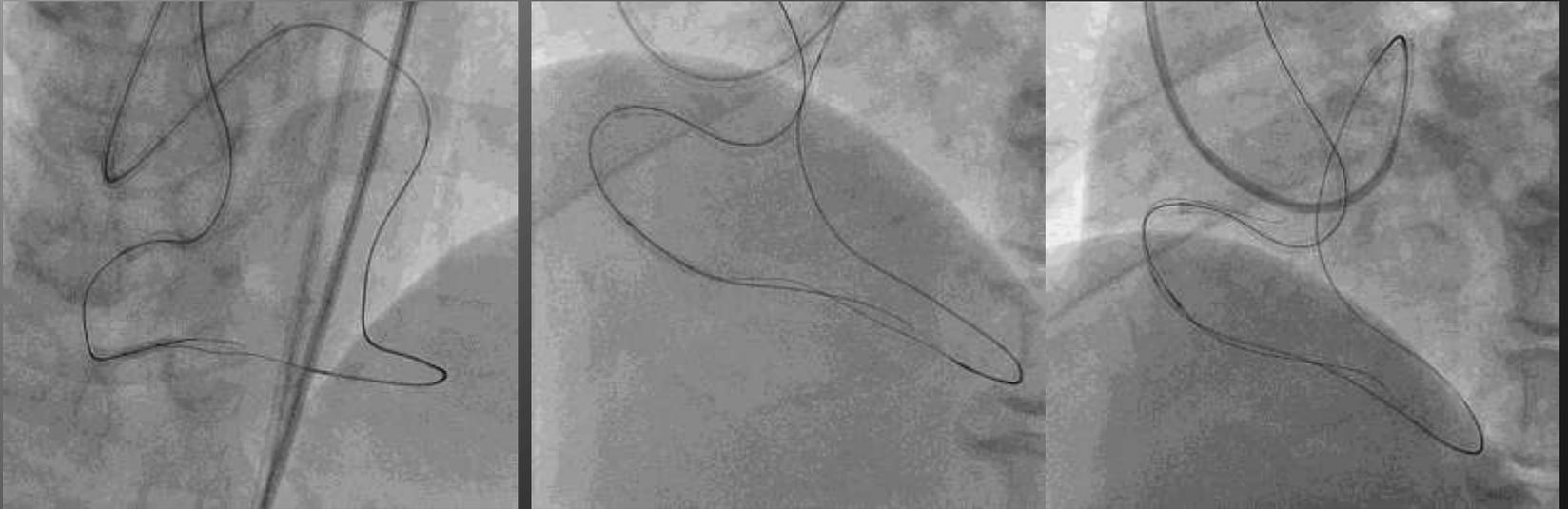


Case 4: RCA CTO treated by Reverse CART



Failure of penetration

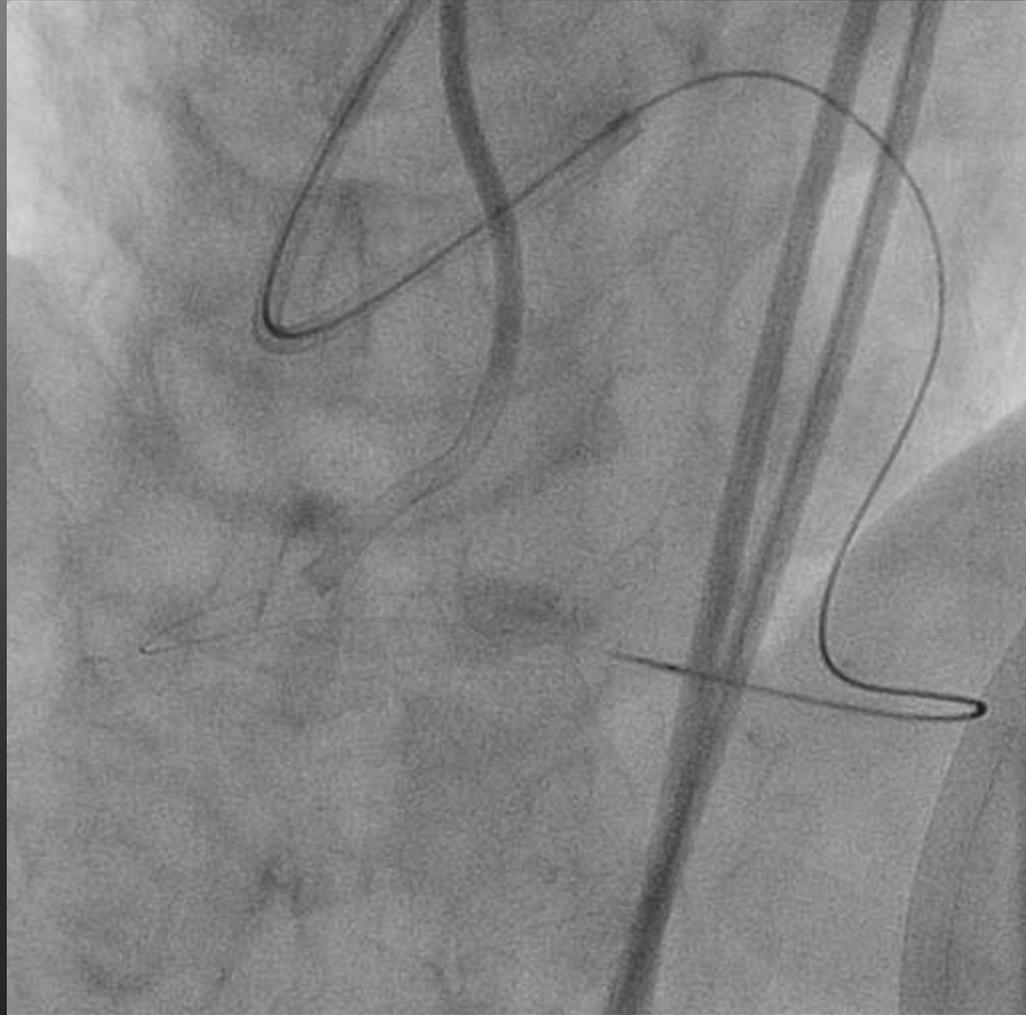
Case 4: RCA CTO treated by Reverse CART

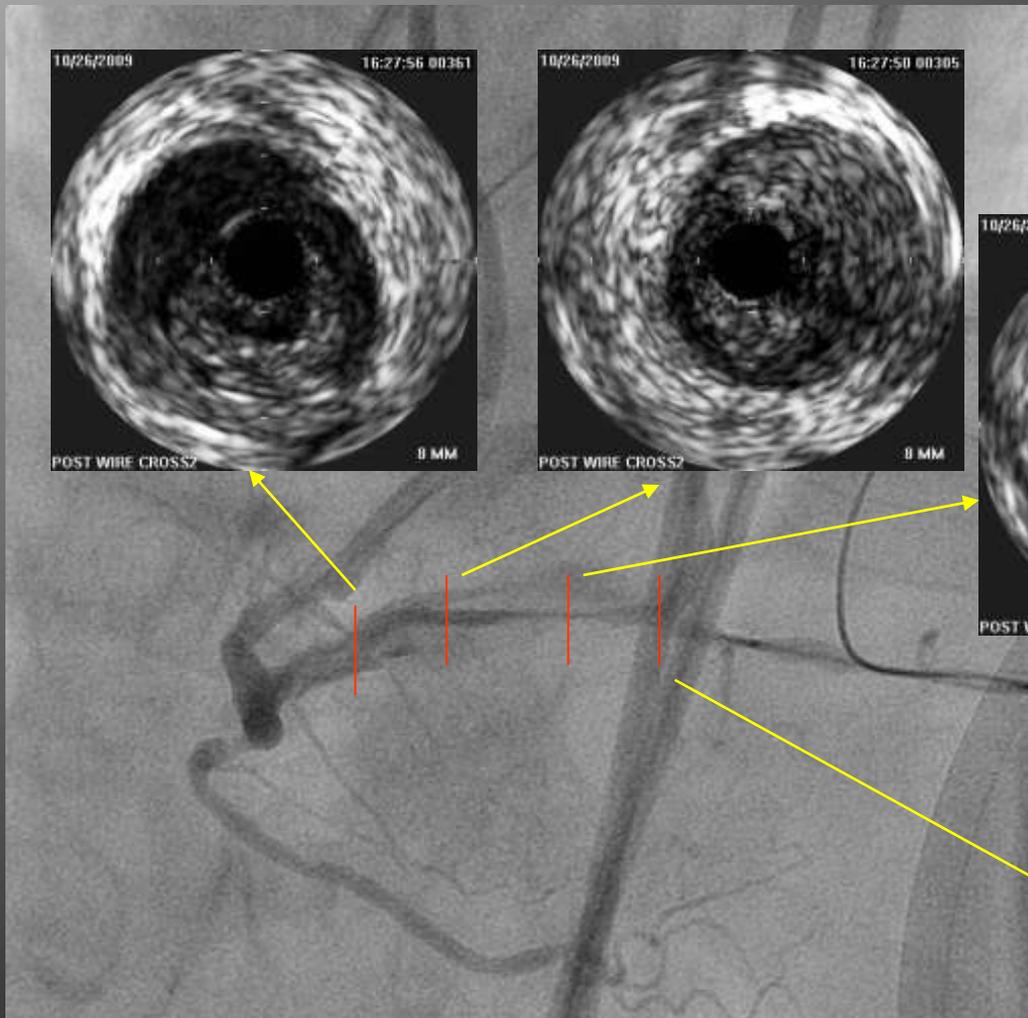
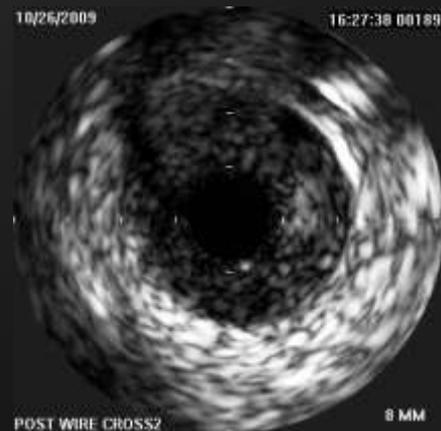
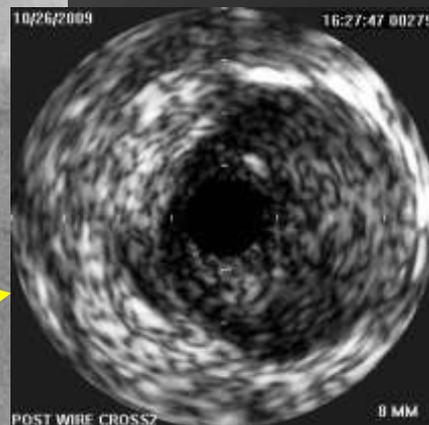


Reverse CART technique

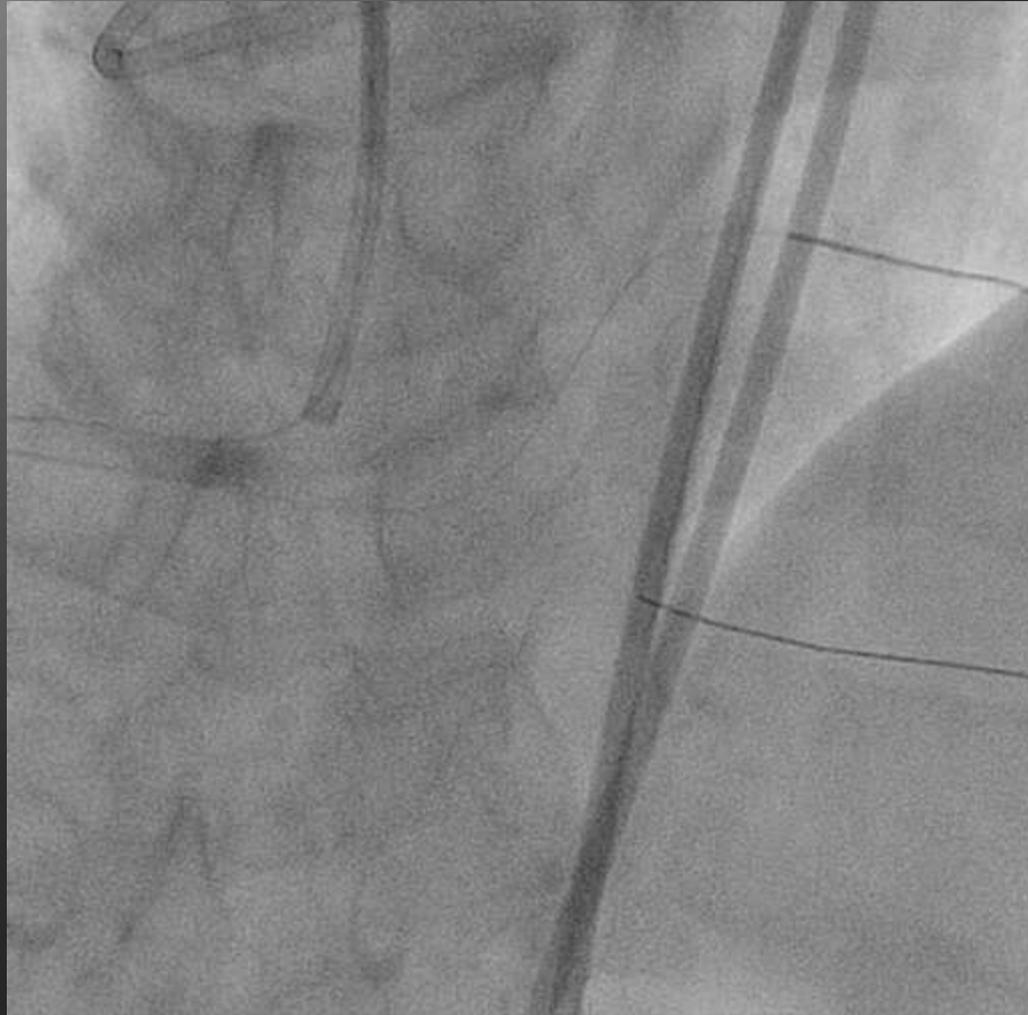


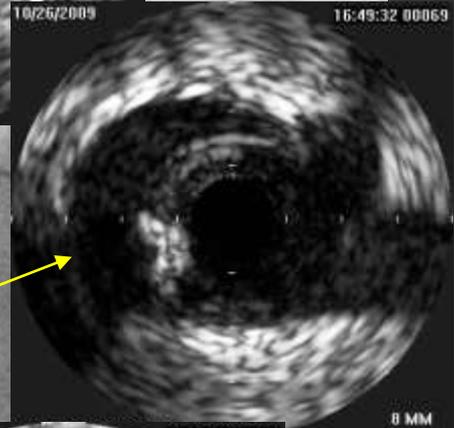
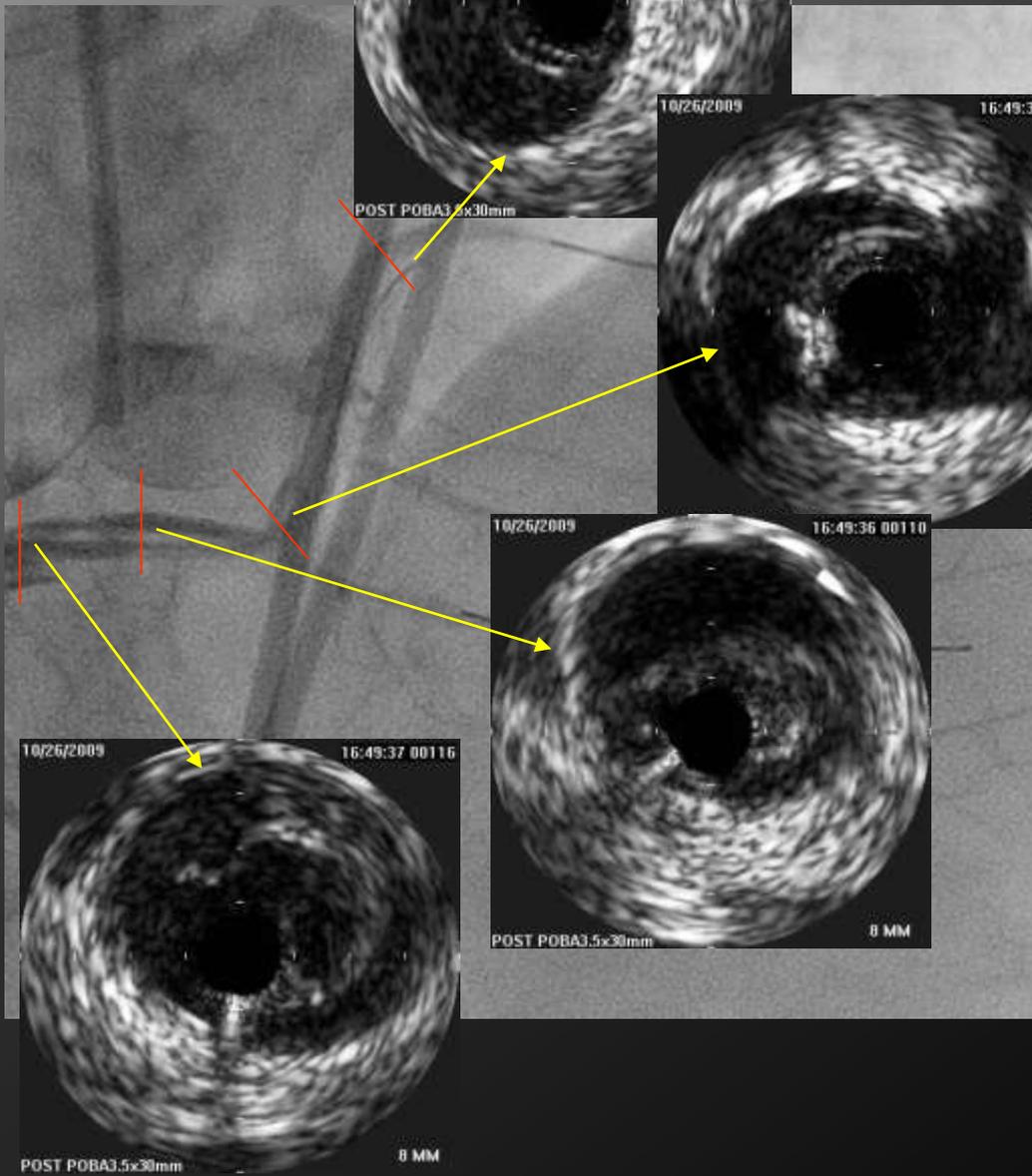
Antegrade injection after GW crossing...



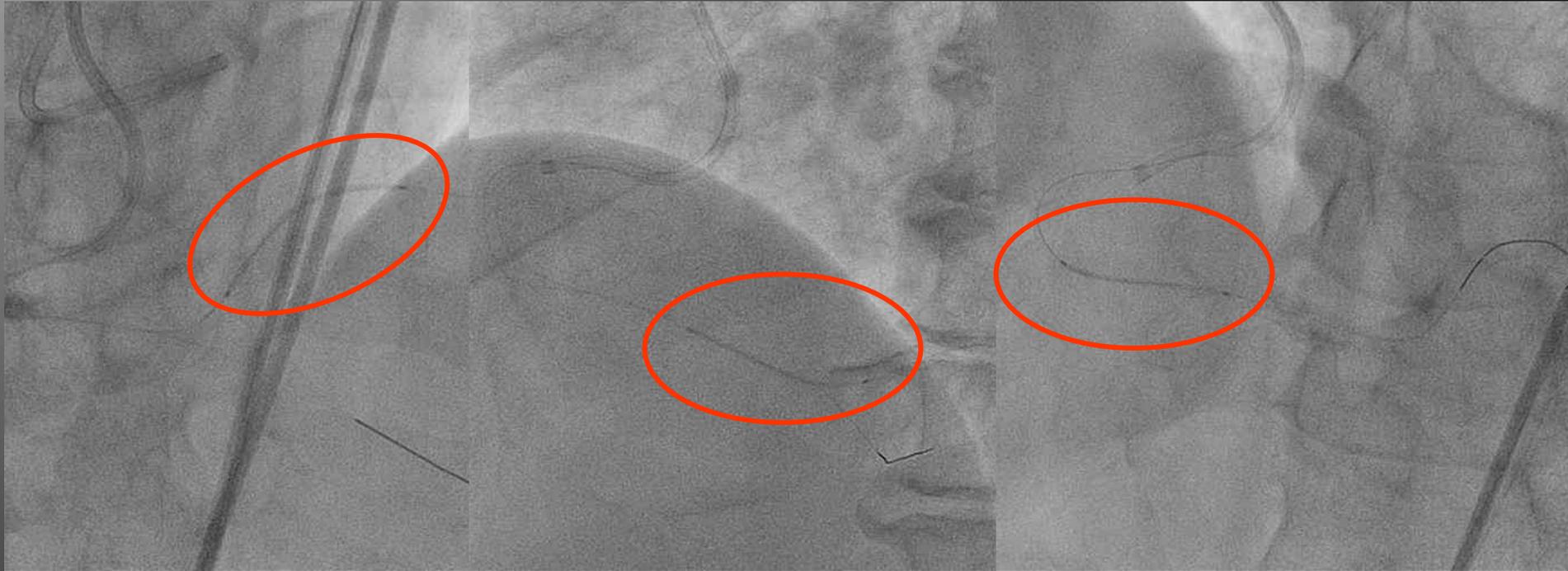


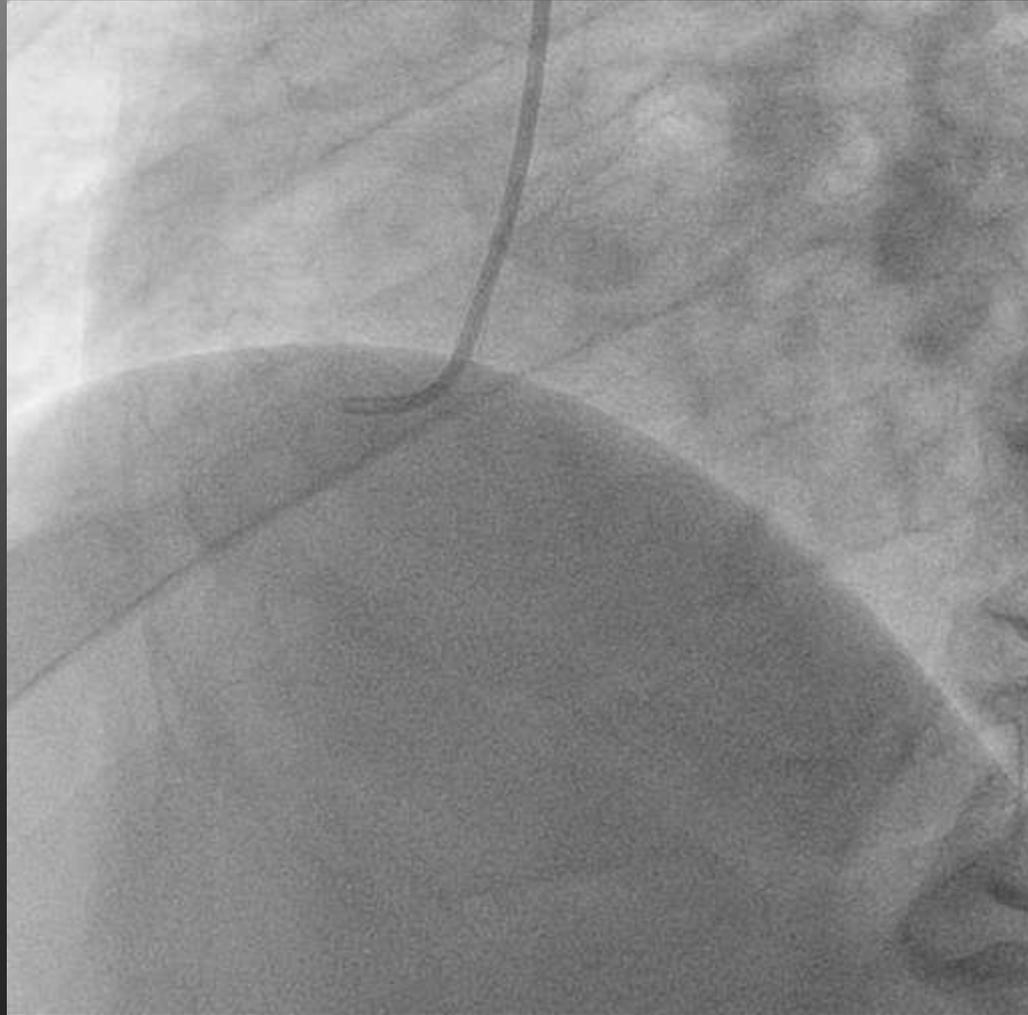
Injection again...





Stenting from #4AV branch...





Summary

- 1. ACT should be kept >300sec and flushing saline should be done in retro GC every 10 minutes.**
- 2. Tip injection from >2 angles is important to identify channel morphology**
- 3. IVUS should be used for contemporary Reverse CART to identify the location of retro wire.**
- 4. Strong back-up force of GC system is needed for advancement of Corsair**
- 5. Never inject from ante GC after Reverse CART!!**